MECHANICAL DIVISION: NEW CENTURY, NEW PROBLEMS . . p. 36

JUNE 26, 1967

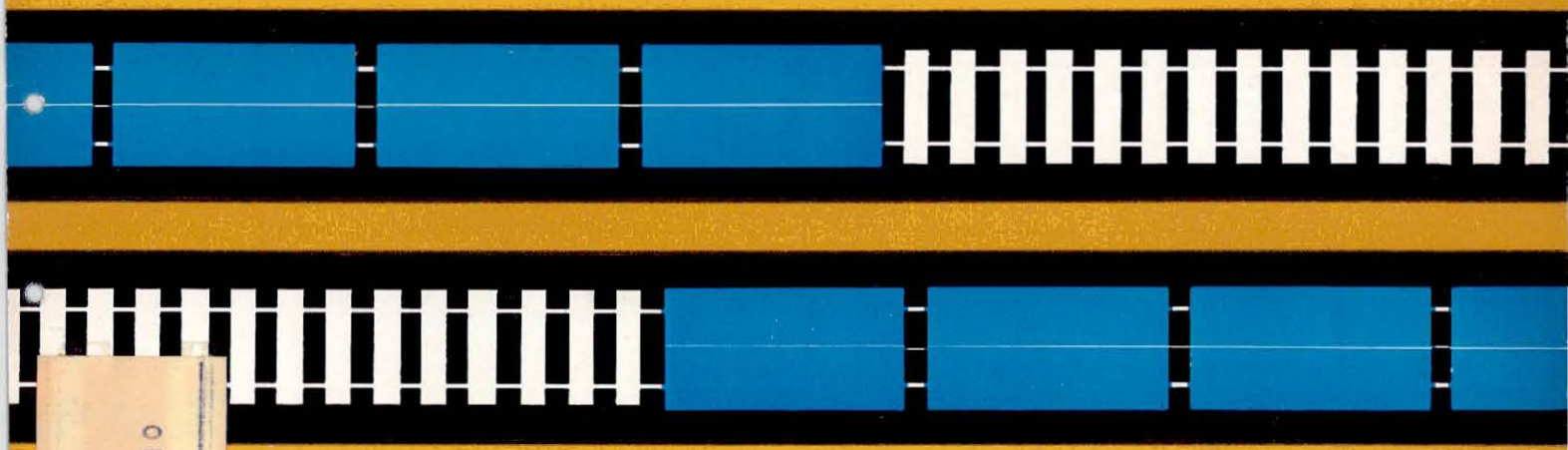
RAILWAY AGE

THE TRANSPORTATION WEEKLY

McCARTNEY LIBRARY
GENEVA COLLEGE

JUN 26

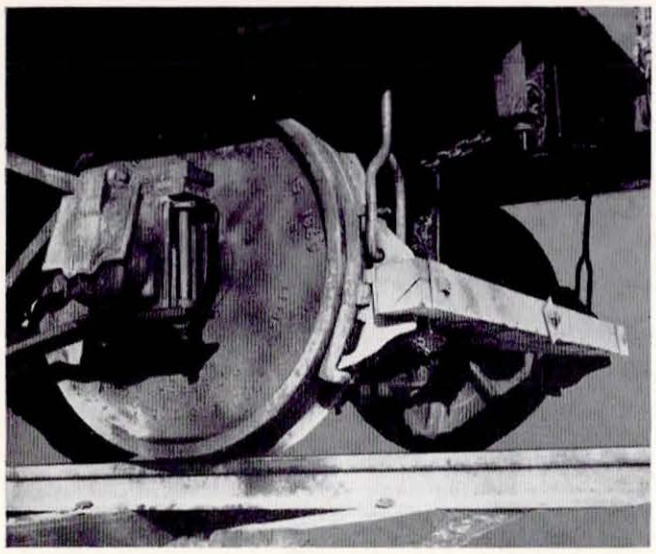
WHAT SHIPPERS THINK OF RAILROAD MARKET RESEARCH p. 31



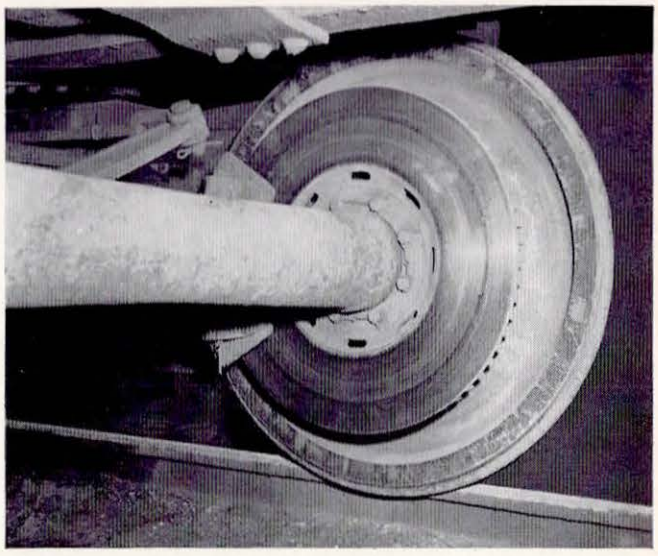
WHY A SIX-MILE BRANCH LINE RATED A GOLDEN-SPIKE CEREMONY p. 34

6067 1116
MCCARTNEY LIBRARY
GENEVA COLLEGE
BEAVER FALLS PA 15010

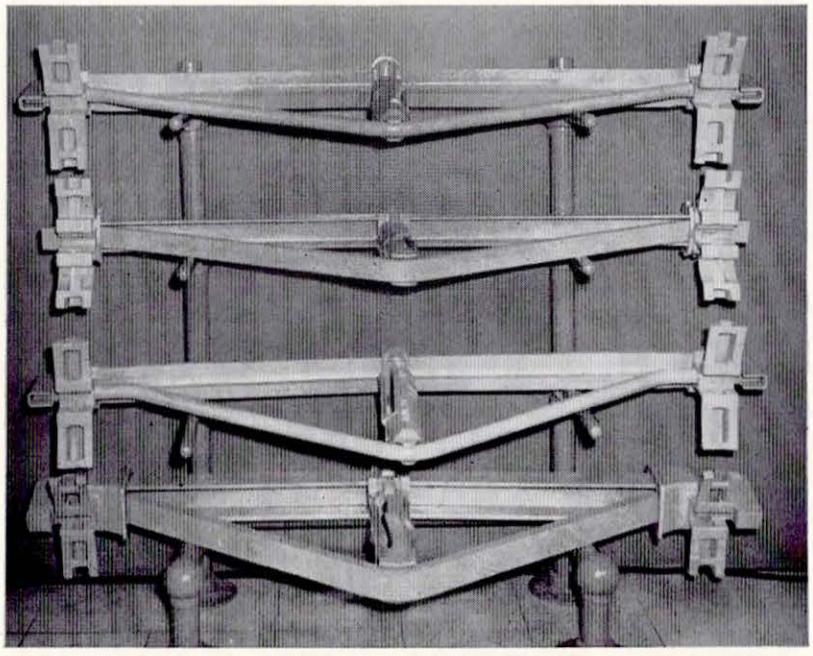
A Century of Progress in Freight Car Brake Rigging



WOODEN BRAKE BEAM
1865



BUFFALO'S DISC BRAKE
1967



BUFFALO UNIT BRAKE BEAMS
Since 1937

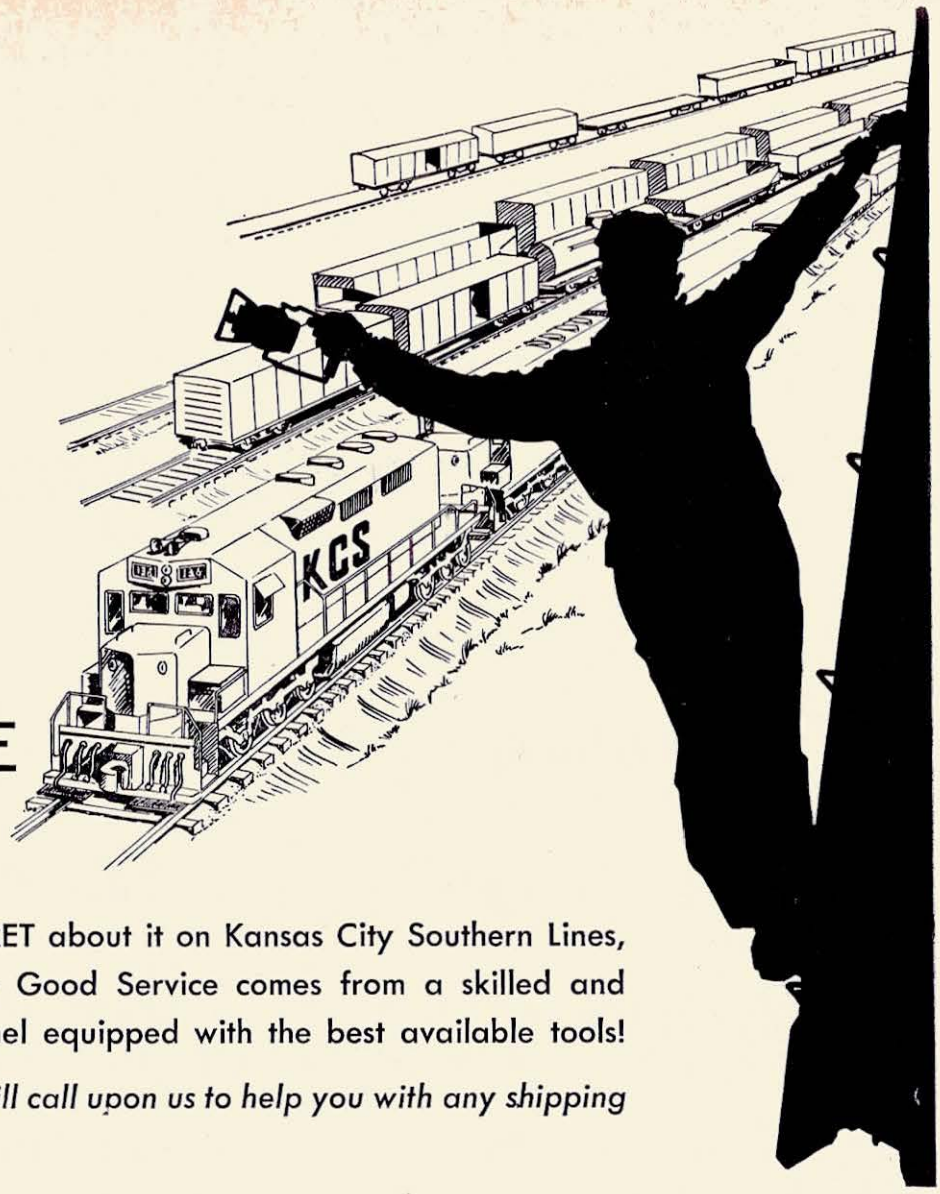
BUFFALO BRAKE BEAM COMPANY

Buffalo, N.Y. 14218 — Lackawanna, N.Y. 14218 — Hamilton, Ont., Canada

MEMBER RPI RAILWAY PROGRESS INSTITUTE

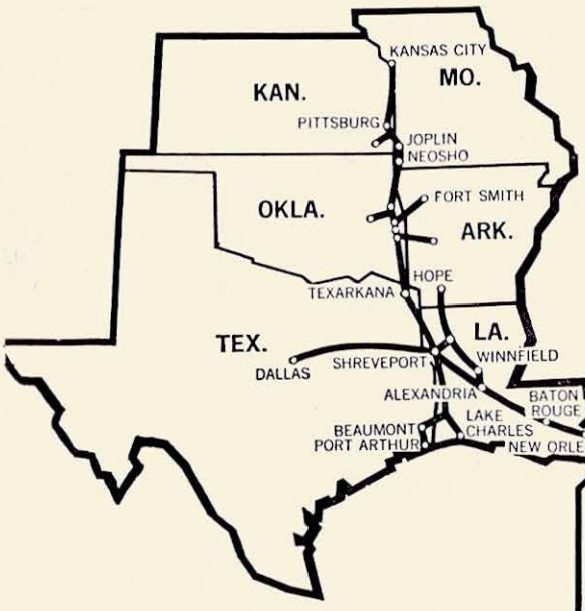
Circle 1 on reader service coupon

THE SECRET OF GOOD SERVICE



THERE'S NO SECRET about it on Kansas City Southern Lines, where consistently Good Service comes from a skilled and dedicated personnel equipped with the best available tools!

We hope you will call upon us to help you with any shipping problem.



WHEN TIME COUNTS, ship the shortest rail way between the Midwest and Five Gulf Ports—New Orleans, Baton Rouge and Lake Charles, Louisiana; Beaumont and Port Arthur, Texas. Other quick service between Kansas City and Dallas, the Southeast and Southwest.

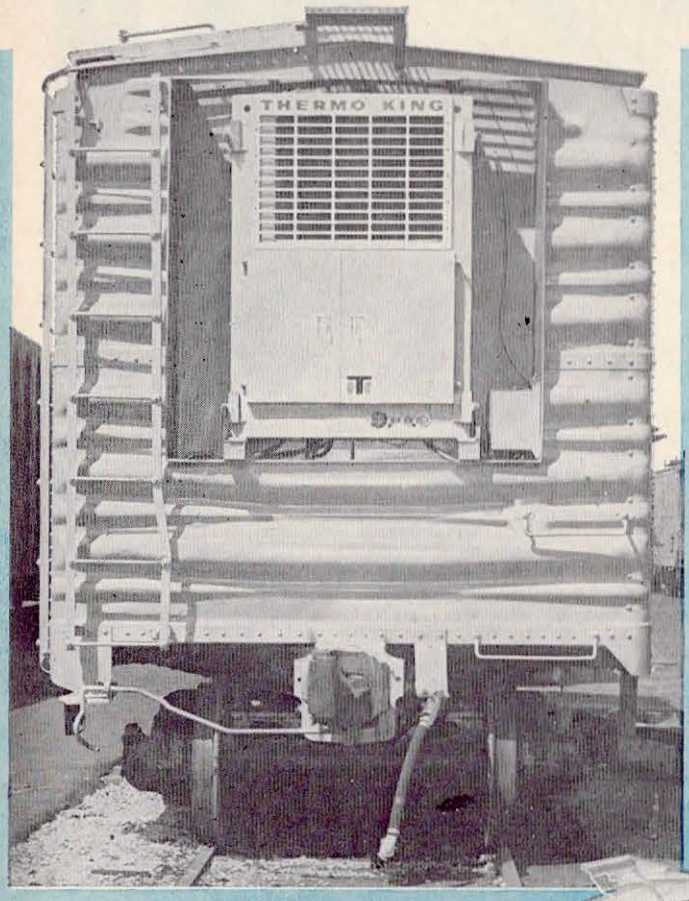
J. W. SCOTT
Vice President — Traffic
KANSAS CITY, MO. 64105
Tel. 816 VI 2-0077

KANSAS CITY SOUTHERN Lines

Circle 4 on reader service coupon

THERMORATED*

THERMO KING Model NWD INCREASES PAYLOAD SPACE 15% IN ICE BUNKER CAR CONVERSION



- Increases interior length from 33′ to 38′ to add 274 extra cubic feet in 40′ ice cars.
- A one-piece factory-tested unit, ready to run when shipped.
- Unit is simple to install and easy to service.
- Powered by rugged, dependable Mercedes-Benz diesel.
- Offers full range temperature control from −20°F. to 80°F.
- All components specially built for roughest transport conditions.
- Electric power standby option is available.
- A super capacity system that will easily handle 50′ cars as well.

Up front mounting of NWD system offers operational advantages. Condenser is cooled by unobstructed flow of clean air. Unit occupies no floor space, and only a few feet of cargo space. It is economical to operate under all types of transport conditions.

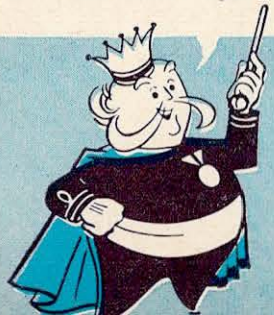
World Leader in Transport Refrigeration

THERMO KING
corporation
Minneapolis, Minn. 55420

Only THERMO KINGS are

*** THERMORATED**

- **VERIFIED PERFORMANCE**—Rated capacity with assured reliability
- **JOB ENGINEERED**—Developed for a specific requirement
- **TOTALLY "BUILT-FOR-TRANSPORT"**—Custom components with rugged durability
- **SERVICE/PARTS PROTECTION**—Factory authorized dealers everywhere



RAILWAY AGE

June 26, 1967 • Vol. 162, No. 25

THIS WEEK

31 What shippers think of market research

Traffic Poll respondents say what they think of railroad market research—and railroads explain their techniques.

34 Milwaukee has high hopes for a new branch line

The $1-million line, only 6.4 miles long, taps a region that is developing as an important agricultural-industrial complex.

36 Mechanical Division heads into its second century

As it meets in Chicago this week, the Division is busy planning additional major contributions to the railroad industry.

46 New P-S Technical Center is geared for research

Long-range planning and engineering of freight cars will be assisted by computers at the Champ Carry Technical Center.

48 AARS report zeroes in on derailments

A fact-packed presentation on derailments—their causes and cure—will highlight this week's meeting of the Superintendents.

88 Viewpoint—Marketing: On the mark?

Railroads claim to have become very market oriented. But, is it a matter of more theory than actual practice?

DEPARTMENTS

33	As the Editor Sees It	79	People in the News
83	Freight Carloadings	7	Short and Significant
82	Industrial Traffic	82	Supply Trade
69	Letters from Readers	31	Traffic Poll
12	Lines on Labor	88	Viewpoint
8	Monday Morning Report	56	Watching Washington
83	New Equipment	11	Week at a Glance
66	New Products Report	84	You Ought to Know

Editorial and Executive Offices
New York, N.Y. 10007, 30 Church St.
Western Editorial Offices
Chicago, Ill. 60604, 14 E. Jackson Blvd.

ROBERT G. LEWIS: Publisher
LUTHER S. MILLER: Editor
FRED C. MILES: Executive Editor

Managing Editor: Edward F. Donlon
Traffic-Transportation: Gardner C. Hudson
Transit Editor: Joseph Asher
Mechanical:
C. L. Combes F. N. Houser
Art Director: Joel Petrower
Art Editor: Maurice H. Mates
Art Assistant: Marvin Friedman
Editorial Assistant: June Meyer
Director of Research: H. B. Bolander
Librarian: Edith C. Stone
Production Manager: Fred B. Hecht

Chicago
GUS WELTY: Senior Editor
Western News Editor: Frank Malone
Mechanical: Norman E. Gillespie
Engineering:
M. H. Dick R. E. Dove
Signaling & Communications:
Robert W. McKnight E. L. Abbott
Purchases & Stores:
Art Hanford
Editorial Assistant: Wanda Brown

Washington, D.C. 20004,
National Press Bldg.
Washington Editor: Walter J. Taft

London, W.C. 2, England, 4, Talbot House; 98 St. Martin's Lane
International Editors:
Geoffrey Wilson John Levett

Contributing Editors:
Charles Layng
115 West Gore St.
Orlando, Florida 32806

E. L. Woodward
876 Chattanooga Ave.
Pacific Palisades, Calif. 90272

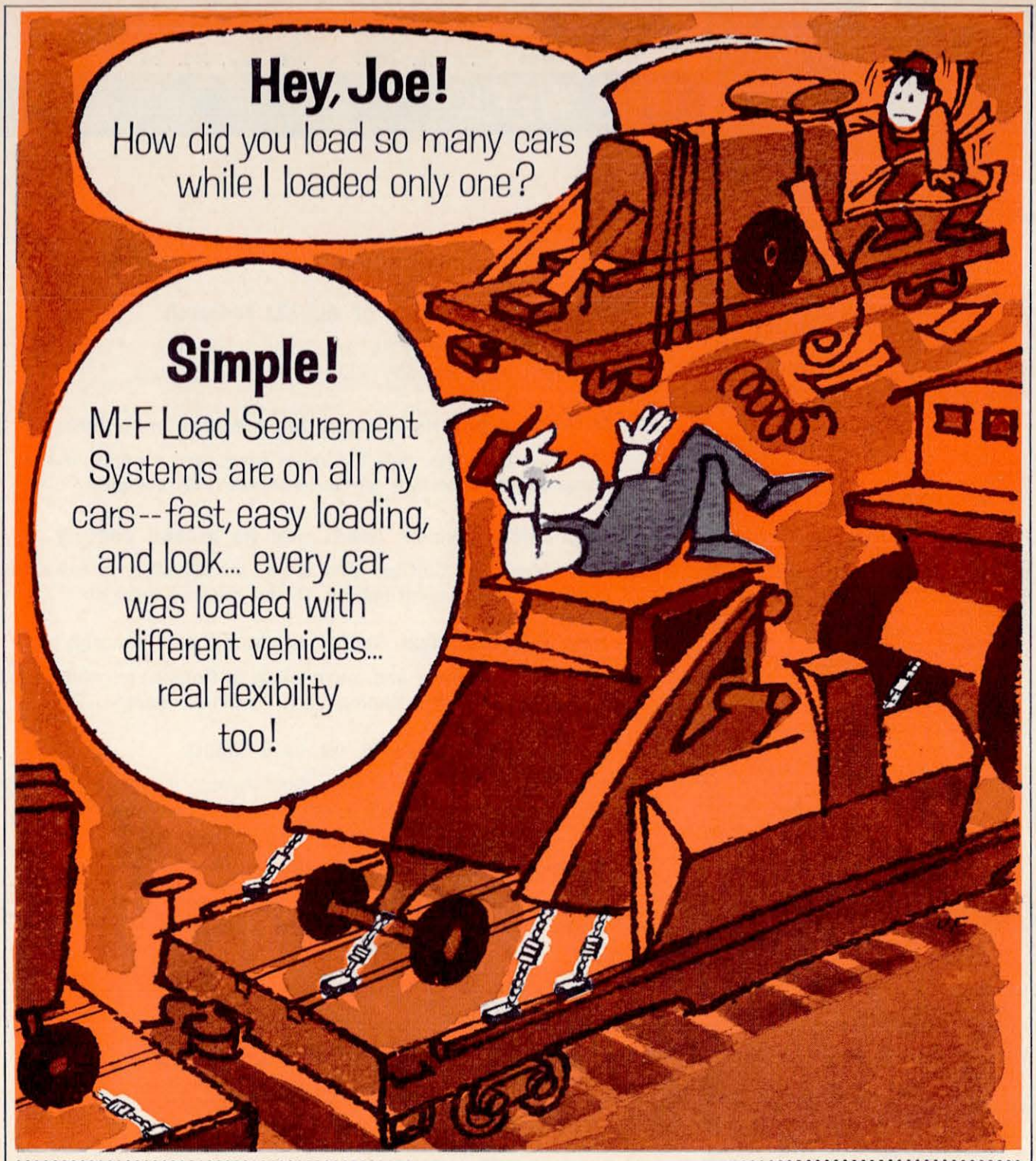
GEORGE DUSENBURY: Editorial Director

C. J. FISHER: Vice President—Sales, New York

For list of sales offices, see index page

Railway Age, established in 1865, is indexed by the Business Periodicals Index, the Engineering Index Service and the Public Affairs Information Service. Name registered in U.S. Patent Office and Trade Mark Office in Canada.
Published weekly (except for four issues combining two-in-one) by the Simmons-Boardman Publishing Corporation at 440 Boston Post Road, Orange, Conn.
Railroad employees' subscription rate: U. S. possessions, Canada and Mexico, $6 one year, $8 two years, all others $14 for one year, payable in advance and postage paid. To railroad employees elsewhere in the western hemisphere, $10 a year. In other countries, $15 a year. Single copies, 60¢ except special issues. Address all subscriptions, changes of address and correspondence concerning them to Subscription Dept., Railway Age, Emmett St., Bristol, Conn. 06010.
Change of address should reach us three weeks in advance of next issue date. Send old address with new, enclosing, if possible, your address label. Post Office will not forward copies unless you provide extra postage.

Circulation Dept.; John Rogers, Circulation Manager, 30 Church St., New York, N.Y. 10007. POSTMASTER—SEND FORM 3579 TO EMMETT ST., BRISTOL, CONN. 06010.
Printed at the Wilson H. Lee Co., Orange, Conn. 06477. Second-class postage paid at Orange, Conn. and at additional mailing offices.


Hey, Joe!
How did you load so many cars while I loaded only one?
Simple!
M-F Load Securement Systems are on all my cars--fast, easy loading, and look... every car was loaded with different vehicles... real flexibility too!

Thanks, Joe, for noticing. You can see why Shippers and Railroads both like the new M-F Systems. Loading is fast. Shipments arrive without damage. Look to M-F for tie-down systems for all types of products: farm and construction vehicles, lumber, steel plate, pipe, etc. MacLean-Fogg, 1048 Allanson Road, Mundelein, Illinois 60060. Tel: 312/566-0010.

MF

IN CANADA: THE HOLDEN COMPANY, LTD., MONTREAL

Circle 6 on reader service coupon

SHORT AND SIGNIFICANT

ICC told it can fix pay for car moves it orders

Empty cars moving in compliance with ICC distribution orders could become revenue freight if the Commission accepts the advice of Examiner Walter D. Matson. The orders involved are so-called Pfahler orders issued by Director R. D. Pfahler of the Commission's Bureau of Operations to alleviate car shortages. Matson's report, in No. 34731 (Sub-2), passes on a Southern petition which raises the issue of compensation for the first time. Railroads opposing the petition contend that compliance with the Commission's orders without compensation is contemplated by the per-diem rules. Matson says Southern subscription to those rules does not preclude its bid for compensation.

GS, NY Air Brake about to merge

Nathan R. Owen, chairman of General Signal Corp., and C. T. Zaoral, chairman of New York Air Brake Co., announced they've agreed on terms for General Signal to acquire New York Air Brake. Subject to approval by directors and stockholders on both sides, General Signal—parent company of General Railway Signal—will be the surviving company; each share of N.Y. Air Brake common stock would be exchanged for 0.20 common shares of GS, together with 0.32 shares of $4.00 convertible GS preferred. In the combined firm, GS Chairman Owen would be chairman and executive officer, GS President Harold A. Strickland its president, and Air Brake President Philip R. Fortune would be chairman of the executive committee. Air Brake's present Chairman Zaoral is due to retire next month. The two firms stressed that GS' establishment in the mass transit and high-speed corridor fields will enable Air Brake to expand in the same direction.

For GN, a marketing setup and other changes

In both concept and execution, Great Northern is changing old managerial patterns—and the effects will be felt from one end of the system to the other. Perhaps the most far-reaching change is the establishment of a marketing department in place of the traditional traffic department. GN sales representatives from throughout the U.S. and Canada will be filled in on the new program at meetings beginning June 27 in Glacier National Park. Traffic Vice President M. M. Scanlan will become marketing vice president July 1. Working with Scanlan will be three assistant vice presidents, for market planning, marketing and industrial development. Other major organizational changes will affect the executive and operating departments. In one move, T. J. Lamphier, assistant to the operating vice president—planning, was elected vice president—administration. GN is reducing the number of divisions in its operating department from eight to seven through merger of two divisions in the Pacific Northwest to increase efficiency on the north-south line between Northwest points and California.

Training planned for high-speed line workers

Some 4,000 Pennsylvania employees will be retrained to operate the new high-speed rail equipment scheduled to be placed in service in October between Washington and New York. The U.S. Department of Labor and the Department of Health, Education and Welfare are expected to contribute more than $800,000 to the training program in cooperation with the railroad. Training of 46 instructors has already started and will be completed in six weeks at a cost of $118,000. The 4,000 employees, representing 20 railroad and shopcraft unions, will be retrained in more than 25 occupations ranging from engine-men to ticket sellers. The Labor Department's Bureau of Apprenticeship and Training has developed an on-the-job training program that will cost slightly more than $200 per man.

MONDAY MORNING REPORT

Railroad research: How much, what kind?

For some reason, four subjects are always good for an argument—politics, religion, women, and railroad research. Suggest that railroads perhaps are not doing all they should in the research area, and you get—from a number of top people in the business—a high-decibel defense brief. Suggest that railroads perhaps are not doing the kind of research they should be doing and you get—also from a number of top people—a rather sad nod.

Good questions, tough questions

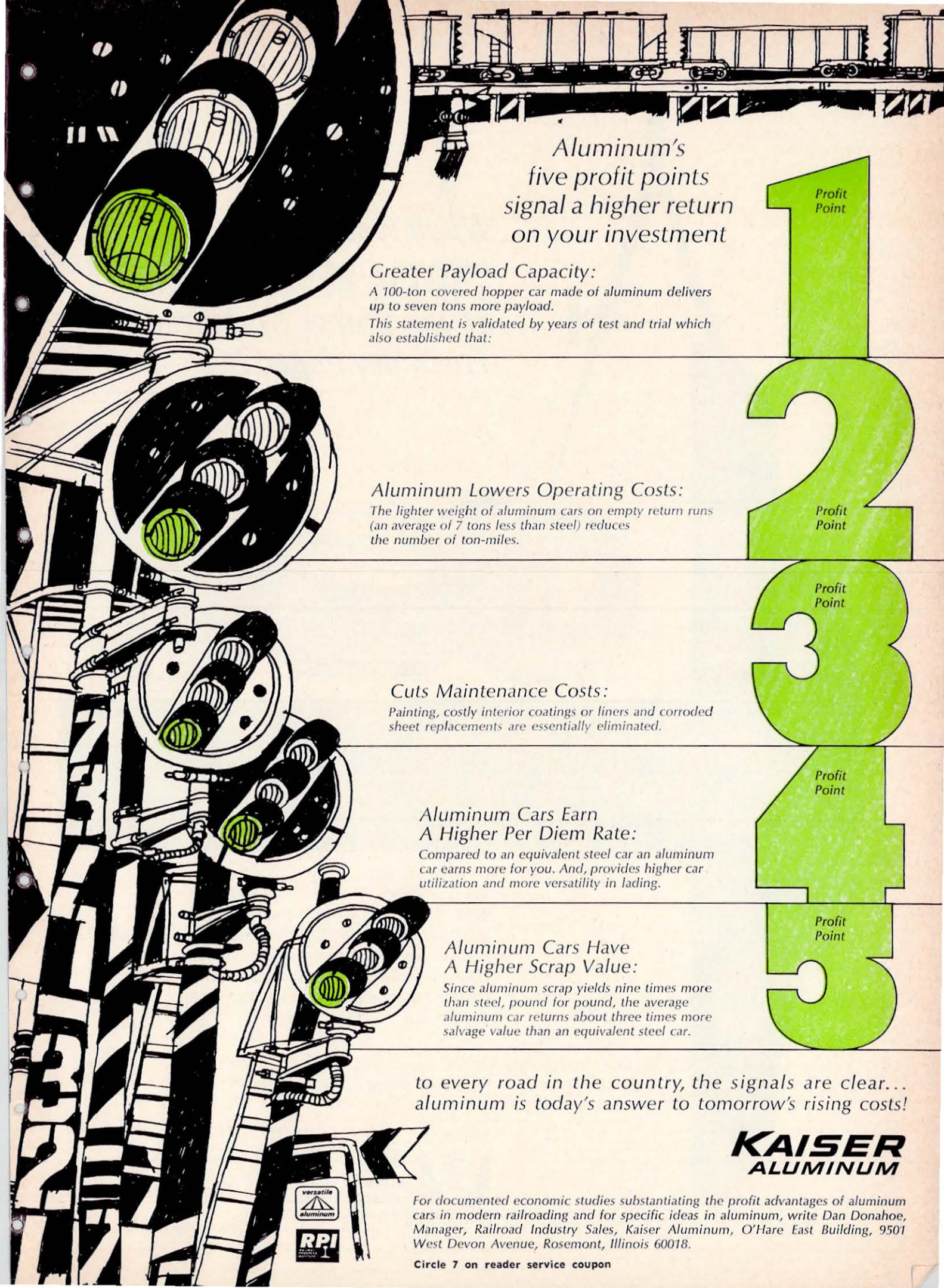
A man who has seen railroad research in, probably, all its forms came to Chicago last week to lend a hand in the dedication of Pullman-Standard's Champ Carry Technical Center—and he took the opportunity to unload a few pointed comments on research, generally and specifically. A. Sheffer Lang, Federal Railroad Administrator, in the Department of Transportation, started with a definition: "Research is fundamentally a process of asking carefully structured questions and of developing the answers to these questions in a carefully structured way." "Research," Lang said, "is, therefore, a frame of mind, and, even more importantly, an organizational attitude." Good research, he pointed out, asks good questions. And good questions "are at once tough questions and questions which have genuine relevance to the concerns of the questioning organization and the environment in which they operate."

Everybody's taking the "easy approach"

So, then, how about research in the railroad industry? Lang put it flatly: "My conviction is that we in the railroad industry have neither asked enough good questions nor pursued their answers with sufficient seriousness of purpose—and when I say 'we' I mean all of us who are in any way involved in railroad transportation: the railroad labor organizations, the railroad supply industry, and government at all levels. Railroad management has spent much time asking the easy questions about how it could preserve its historic market for railroad transportation. It's only recently that it has begun in earnest to ask and answer some of the tough questions about how we can build new and better markets for railroad transportation. Management and labor have spent much time thinking about how to preserve their historical prerogatives at the bargaining table, but relatively little time working on the tougher questions of how to create new and more fruitful management-employee relationships and a stronger railroad transportation system. The supply industry has spent much time asking easy questions about how to make present railway equipment cheaper and better, but it seems to have spent much less time asking the tough questions about the future requirements for railroad transportation and the demand which these will exert for entirely new equipment concepts. Government seems to have spent its time asking that the railroad industry answer old questions about rates and service, and almost no time asking, together with the industry, the tough questions about where railroad transportation should be going and how best it could get there."

The question of asking questions

Lang's concern is not so much that answers aren't available now to the many questions facing the industry. It's the question—and the approach—that bring on the worry. "I do not see enough of the important questions being asked with enough seriousness, with enough care—with enough trained, inquisitive minds. I see—or I think I see—too many organizations trying merely to do the same business in essentially the same way, albeit trying to do it a little better. This is fine. But it is not good enough in a modern world."



Aluminum's five profit points signal a higher return on your investment

Greater Payload Capacity:

A 100-ton covered hopper car made of aluminum delivers up to seven tons more payload.

This statement is validated by years of test and trial which also established that:

Profit Point 1

Aluminum Lowers Operating Costs:

The lighter weight of aluminum cars on empty return runs (an average of 7 tons less than steel) reduces the number of ton-miles.

Profit Point 2

Cuts Maintenance Costs:

Painting, costly interior coatings or liners and corroded sheet replacements are essentially eliminated.

Profit Point 3

Aluminum Cars Earn A Higher Per Diem Rate:

Compared to an equivalent steel car an aluminum car earns more for you. And, provides higher car utilization and more versatility in lading.

Profit Point 4

Aluminum Cars Have A Higher Scrap Value:

Since aluminum scrap yields nine times more than steel, pound for pound, the average aluminum car returns about three times more salvage value than an equivalent steel car.

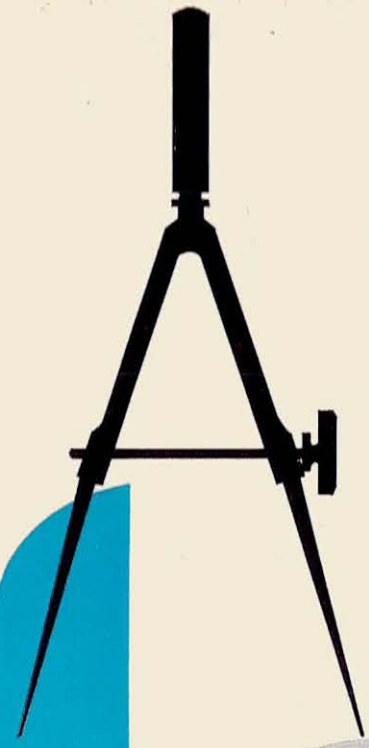
Profit Point 5

to every road in the country, the signals are clear... aluminum is today's answer to tomorrow's rising costs!

KAISER ALUMINUM

For documented economic studies substantiating the profit advantages of aluminum cars in modern railroading and for specific ideas in aluminum, write Dan Donahoe, Manager, Railroad Industry Sales, Kaiser Aluminum, O'Hare East Building, 9501 West Devon Avenue, Rosemont, Illinois 60018.

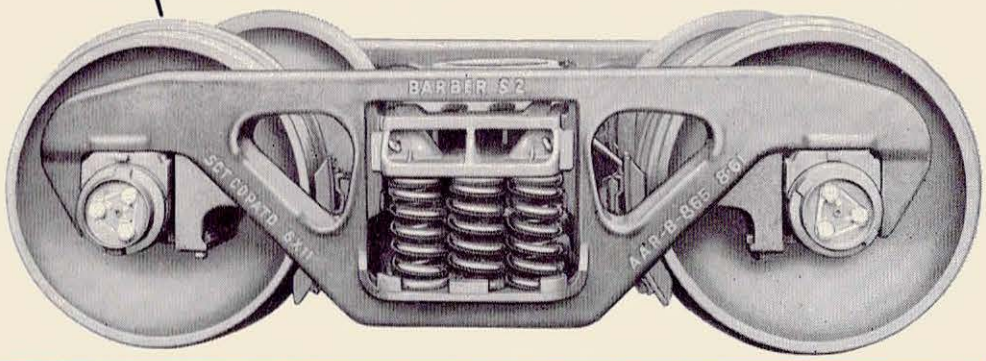
Circle 7 on reader service coupon



When was the

"TOTAL DESIGN CONCEPT"

of the Barber Stabilized Truck developed?



...EVERY DAY!

The first Barber Stabilized Truck was designed in 1932. Since that time it has undergone continual improvement. Its superiority has been proven through years of use... to give greater lading protection, longer service life, lower maintenance. And less first cost too! An excellent design in 1932, even better today... and tomorrow.

"Talk to the Man from Barber"

BARBER STANDARD CAR TRUCK COMPANY
CHICAGO • PHILADELPHIA • MONTREAL

3573

Circle 8 on reader service coupon

WEEK AT A GLANCE

Railroads spell out need for rate hikes to ICC

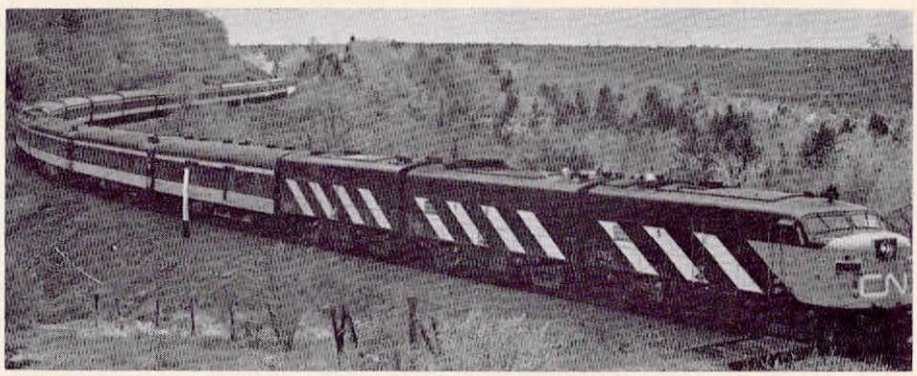
Armed with facts and figures to support their case, the railroads told the ICC last week that freight-rate increases are necessary to offset the impact that higher wages and other costs will have on their earnings. Nine verified statements with accompanying exhibits, filed in Ex Parte No. 256, were used by railroad spokesmen to point up the "deteriorating results recorded for the past 12 months" in the industry's revenues.

The Commission also received from Transportation Secretary Alan S. Boyd a letter requesting that it have inflationary factors in mind when it decides the rail case—and proposed truck rate increases which are also pending. Commission Chairman William H. Tucker acknowledged the Boyd letter and went on to tell the Secretary that the Commission decides cases on the basis of the record. Tucker also explained that D.O.T. could get its views considered by entering the case with formal pleadings.

Tucker said that railroad results now reflect a healthy situation generally, even though recent trends have not borne out the prospects of a couple of years ago. The railroad presentation in the rate case does not reflect that kind of sanguiness. The over-all presentation is in the testimony and exhibits of B. N. Behling, vice president of the AAR and director of its Bureau of Railway Economics. According to Behling's figures, 1967's net income will be only $680.5 million, down from 1966's $902.2 million if there is no rate increase. The proposed rate hikes would yield something like $338 million a year, more than $100 million short of the cost increases totaling $441 million on which the plea is based. Most of the latter—$320 million—will be paid out in higher wages and improved fringe benefits for employees. The proposed increases are not expected to result in any appreciable loss of traffic. As usual in general rate cases, however, the railroads announced their readiness to adjust the increases downward where loss of business is threatened. Presentations opposing the increase are due July 10, and the case will be submitted to the Commission for decision following the close of oral argument, which begins July 11. Chairman Tucker said that he expected the Commission to issue a decision "within weeks" after the close of the arguments.

Canadian National creates a new "name" passenger train

Famous-name passenger trains are fast-disappearing from railroad timetables. Bucking the trend, Canadian National has just added a new passenger run that it hopes will become famous and successful—but its passenger department men admit that they're keeping their fingers crossed.



CN's new train is the "Cabot," now making daily runs between Sydney, Nova Scotia, and Montreal. Its inauguration this month marked two important firsts. It's the first passenger train to operate directly between Sydney, N.S., and Montreal, and the first major passenger train to traverse the length of the former National Transcontinental Line through Central New Brunswick to Montreal. The Transcontinental Line was conceived at the turn of the century to link Moncton and Winnipeg, joining with Grand Trunk Pacific to provide a route to East Coast ports for grain traffic—and to carry immigrants West to settle.

The new train will provide direct Montreal service for Cape Breton and northeastern Nova Scotia as well as for Edmundston and points in Maine.

No strike—but no solution, either

A shopcraft-union strike deadline came and went, last week—with no strike and, still, with no agreement on how the dispute will be settled. Legislation to handle the situation bogged down with the Senate approving a mediation-to-finality bill, the House approving a mere mediation bill. As of last week, no conference had been scheduled—and neither Senate nor House gave indication of a willingness to accept the other's approach.

Meanwhile, the shopcraft union decided to postpone action while the lawmakers pondered the problem. Their strike-stay was indefinite—and there were indications that some reassessment of positions might be made, if Senate and House don't move with some speed. And, indirectly, from the White House came a report that the President might be pleased if Congress were to come up with a plan for permanent strike legislation.

A new passenger vice president for the IC

For the first time in years, a Class I road has put its top passenger job on the vice presidential level. The road is the Illinois Central and the man newly-named to the position is Paul H. Reistrup, formerly assistant to the vice president, executive department, B&O-C&O.

Reistrup is well-known in the industry for his efforts to spark passenger operations. In announcing his appointment, IC President William B. Johnson called this part of a new "profit-centered" approach. Reistrup will have across-the-board responsibility for IC passenger operations.

GUS WELTY'S LINES ON LABOR

WELTY

IT'S SPECULATION to say that the Brotherhood of Railroad Trainmen was determined that the farcical wage demands of 1966 would not be repeated in '67. But it might be pretty accurate speculation. At any rate, BRT people have gotten the jump on their peers in the other organizations — and they've whacked last year's demands in half. Now, in all honesty, it's just as unlikely that the Trainmen will get 12½% this year as it was that they'd get 25% last year. But 12½% is, at least, a more realistic demand, as demands go. It's closer to being within the bargaining ballpark—and demands for 25% certainly weren't. They were, in the language of the sports page, strictly bush.

IT'S NO SECRET that top people in the BRT were irritated last year with the outlandish course they felt was forced upon them. In the '66 movement, it may be recalled, the Brotherhood of Locomotive Firemen led off, for the ops. And the BLF&E came in demanding 25%. Cool heads in the BRT still wanted to ask something in the 10%-to-15% range. But some things happened and other things didn't happen, and the BRT rather meekly followed along with its own 25% notices.

IT IS TO LAUGH, as they say. Even the most solidly-entrenched unions in the most prosperous industries don't demand 25%. For the brotherhoods to visit such demands upon the railroads—well, it was to laugh, or it was until the BRT had enough of the nonsense and signed up for 5%. The basic pattern was then set, and most operating and non-operating unions found themselves able to live with it and within it.

AMONG BRT PEOPLE, however, there may still have been a lingering irritation. The basic impracticality of the '66 demands must have rankled-likewise, the jibes from the hotheads in the ranks who like to insist that a 5% settlement on a 25% demand is evidence of weak leadership. In any event, BRT general chairmen were called into session in June of 1967—more than two months before new notices can be served, and more than six months before contract changes can become effective.

THE NEW BRT DEMANDS are hardly practical. But they may represent a step in the proper direction, toward that point where union and management negotiators may find only a narrow gap between what's asked for and what's possible of accomplishment. So, maybe the lessons of '66 did serve a purpose. And, by the way and just in passing, maybe the BRT did a very good thing for itself in choosing the site for the '67 general chairmen's meeting. A fellow, so they say, can learn an awful lot about odds and about economic practicalities—in a few days' exposure to the slots and the wheel and the craps tables at Vegas.

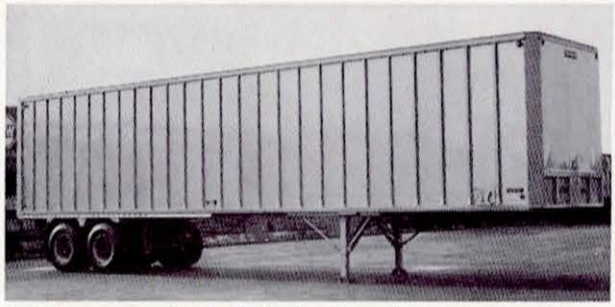
Every feature you want in a door.

Now, Youngstown makes a GREAT single-sheathed door... GREATER! Patented, easy-action gear operation plus all these time-tested features... exclusive locking mechanism insures against possible lading loss in transit, or loss of doors. Strong marginal door members and horizontal supports prevent bulging and distortion of doors. Ease of installation... add insulating material and these doors are ready to hang with newly-designed gasket permanently secured when they arrive at your shops or your carbuilder's.

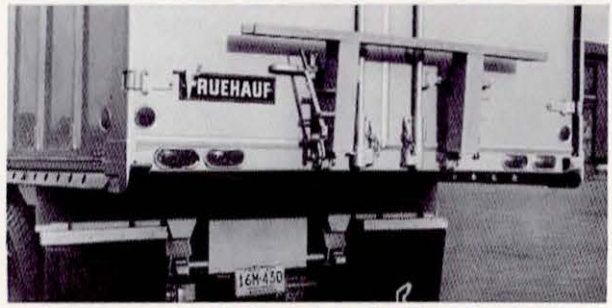
The Youngstown Steel Door Company

CAMEL SALES COMPANY • CAMEL COMPANY LIMITED
CLEVELAND • CHICAGO • YOUNGSTOWN • HAMMOND

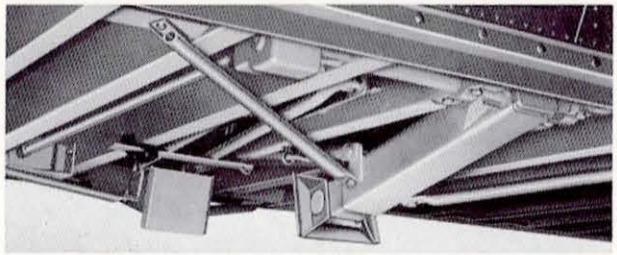
For transportation savings, **YOU CAN'T BEAT THE FRUEHAUF FLEXI-VAN SYSTEM...**



1. When a Fruehauf Flexi-Van Container arrives at the rail siding, it looks exactly like an over-the-road trailer.



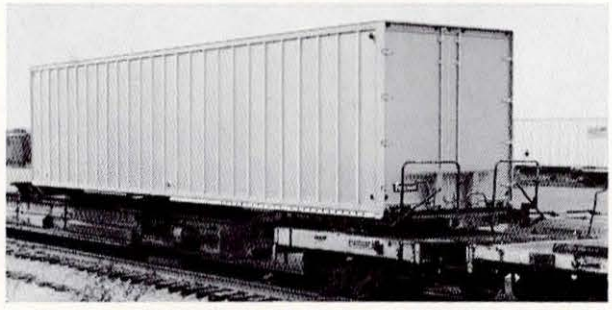
2. In preparation for loading on the Flexi Quad Railcar* the ICC bumper swings up out of the way.



3. Supports fold to the center between crossmembers, out of the way for loading, traveling and unloading.

4. Special yard tractor maneuvers container onto Flexi Quad Railcar's turntable. Leaving bogie where it stands . .

5. . . . the tractor then swings the container parallel to the car. A transfer piston gives a final nudge . . .



6. . . . and the Fruehauf Flexi-Van Container is loaded, locked in place and ready to roll.

Fruehauf coordinates road and rail transport with fast, efficient, Flexi-Van Container system!

Fruehauf's Flexi-Van Container system is designed for smooth, efficient, economical coordination of road and rail transport, is adaptable to sea and air shipments, as well. Individual Flexi-Van Containers can be side-loaded onto specially-built Flexi Quad Railcars and unloaded without the need for cumbersome, expensive lifting equipment. Your Fruehauf representative will explain the principles and economies of the highly developed Flexi-Van Container system in detail. Or write to **Fruehauf Division, Fruehauf Corporation, 10942 Harper Avenue, Detroit, Michigan 48232.**

*Product of Magor Railcar Division, Fruehauf Corporation

FRUEHAUF CONTAINERS
Warehousing in Motion

A Fruehauf means more . . . more when you buy or lease it . . . use it . . . trade it!

U. S. Seaport Service Branches: Baltimore • Boston • Houston • Jacksonville • Kearny, N.J. • Los Angeles • Maspeth, Long Island • Miami • New Orleans • Norfolk • Philadelphia • Portland, Ore. • San Francisco • Seattle • Tampa • Complete container service facilities are also located at many inland Fruehauf Branches in the United States and Canada—as well as overseas.

Circle 10 on reader service coupon

Landreth INDUSTRIES, INC.

Proven best by Test

Testing Laboratories — THE Budd COMPANY — Philadelphia, Pennsylvania

The Inside Story of Budd Report #2238

The Landreth Insulated Car equipped with Landreth's Pre-Molded Urethane Foam Panels has just undergone exhaustive tests. After six months of road tests, the car was tested in The Budd Company testing laboratories in Philadelphia.

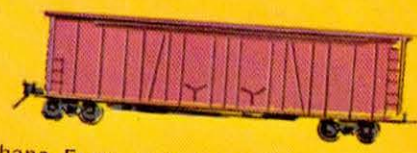
Here are the startling results from the Budd Laboratory's report.

The car constructed with the Landreth Pre-Molded Urethane Foam Panels was to be tested against two other cars constructed with Urethane Foam block. All the cars had been previously road tested for six months or longer.

The Landreth equipped car had absolutely no air leakage, no hot spots, and no voids in the foam. In addition, at 100 degrees differential, the car built with the Urethane Foam block had a BTU average of 143 BTU's per hour. The car equipped with the Landreth Pre-Molded Urethane Foam Panels, also at 100 degrees differential and tested under the exact conditions, showed an average of just 93 BTU's per hour.

The Landreth Insulated Car was at least 50% more efficient than the car constructed with foam block. Conclusive proof that the Landreth Pre-Molded Urethane Foam Panel--is "Best by Test," both in road and laboratory testing!

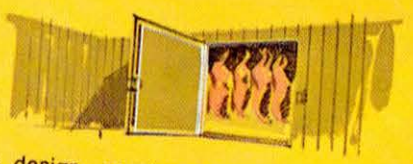
Landreth systems have many diversified applications



Urethane Foam and all Fiberglas Panels f insulated box cars and mechanical temper ture control cars.

Urethane Foam and all Fiberglas Panels for tractor trailers.

Urethane Foam and all Fiberglas Panels for containers.



The design, construction and application of cold rooms for dairies, breweries, frozen food processors, citrus plants, cold storage plants, bakeries, and many others.

Pre-Molded and Pre-Cut Insulation Walls for home and industrial construction.

Pre-Molded and Pre-Cut Urethane Foam Panels with steel inner face for Ore Jennies.

Landreth industries offers
the most modern facilities to insure
highest quality control material available

Home office and plant facility in Evanston, Illinois. Research-testing laboratory and world's most modern cold room facility.

Our new mechanized manufacturing facility south of Chicago.

Landreth offers the most modern cold room testing laboratory in existence today. The cold room is 85 ft. long and is large enough to accommodate and test under controlled laboratory conditions the largest insulated cars of today and tomorrow.

Landreth engineers simulate extreme temperature variations. By testing the efficiency of various insulation materials, you are guaranteed the best possible insulation panel to suit your specific needs.

The cold room is constructed with Landreth prefabricated Urethane Foam Panels. And the control room is equipped with the most modern equipment. The Landreth cold room laboratory was set up in conjunction with and approved by the U. S. Bureau of Standards.

The cold room laboratory can measure temperature extremes from −30° F. to + 180° F.

The Landreth engineers accurately measure heat loss by the direct heat flow method, the reverse heat flow method, and air leakage.

Features of the Landreth Pre-Molded Urethane Foam Panels

- No air infiltration
- No localized hot spots
- Non-Burning foam
- Easy repairs
- Seamless vapor barrier

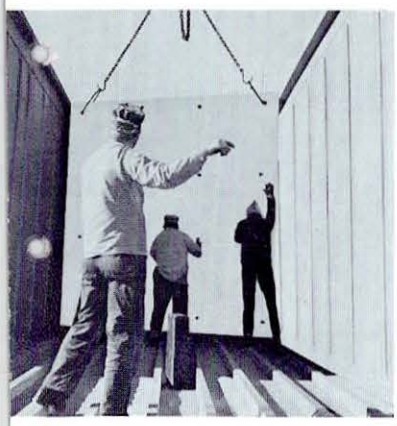
Landreth offers the most modern research and development facilities

A well equipped laboratory to test insulation properties, strengths, and efficiency of insulating materials.

A complete and thoroughly experienced engineering and design staff is available to solve your design and construction problems relating to insulation.

The Landreth system reduces Labor cost and increases efficiency

The new Landreth System enables the builder to provide the most efficient insulation without the necessity of installing equipment and costly facilities. The system provides a more efficient insulation with greater capacity and is much faster to build.

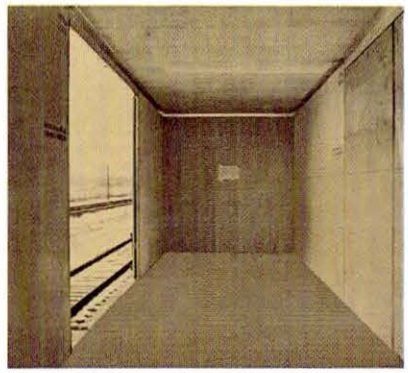


Landreth Pre-Molded Urethane Foam Panels are the most efficient on the market.

Landreth revolutionized the development and application of insulation materials in the railroad industry.

Workman lowering side panel into place.

Workman fastening "Nelson" stud to outside post. Insulation thickness is reduced by ½ over conventional insulation materials.



End panel being lowered into place. Panels are moved into production line on flat cars and lifted into cars by cranes.

All joints foamed to insure complete air-tight car. Only fourteen panels are required per car, cut to size and ready to bolt into place—six for the sides and ends, two for the doors, three for the ceiling, and three for the floor.

- Greater thermal efficiency
- Thinner walls
- Completely prefabricated
- Guarantee no voids
- All joints foamed

- No moisture absorption
- Odor free and non-toxic
- Fungus and rot proof
- Added structural rigidity

- Improves with age—does not deteriorate
- Fire proof
- Does not spread or settle from load vibration or temperature change

These major corporations have experienced the money-saving efficiencies of the Landreth system

The Landreth System has proven itself to be "Best by Test." These are but a few of the corporations that have utilized the knowledge and services of Landreth Industries to solve their insulation problems. Each problem and opportunity presented a different insulation application.

Landreth's Spectacular growth
clearly demonstrates the ability of Landreth's technological knowledge of solving insulation problems.

Landreth
INDUSTRIES, INC

2100 Greenwood Street • Evanston, Illinois • Phone: 328-2062

IS grain door

...way to clear record arrivals

The bold new appearance of International-Stanley's grain door is symbolic of the confidence shippers and carriers can have in the clean, safe delivery of grain with these lighter, stronger, more easily installed and stored doors.

...the preferred door IS

16-R4

INTERNATIONAL-STANLEY CORPORATION 8401 WEST DODGE ROAD, OMAHA, NEBRASKA 68114

Circle 17 on reader service coupon

Sinclair
®

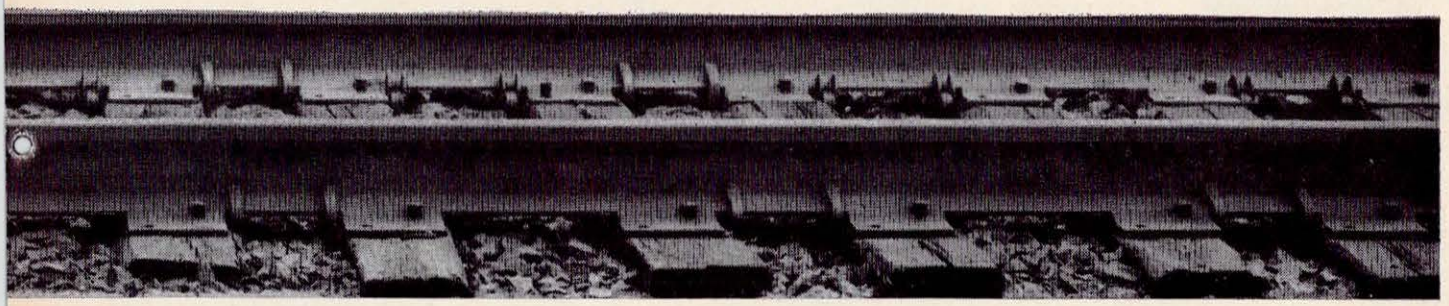
BIG WHEEL ON U.S. RAILROADS

More than 100 U. S. Railroads use Sinclair Gascon® Diesel Lubricating Oils for longer engine life and trouble free operation.

Specially-formulated oils for railroad service include: **Sinclair Gascon GL-XD**—a dependable, long-time performer—with high lubricating ability, resulting in very low wear rates and lower maintenance costs.

Sinclair Gascon GL-Supreme—a highly dispersant oil with a "superior" rating. Gives cleaner engines and longer filter life. For less care and less wear—*USE SINCLAIR.* For additional information, contact:

Sinclair Refining Company, Railway Sales, 600 Fifth Avenue, New York—Chicago—Houston.



Circle 13 on reader service coupon

IT TAKES SIX FOR REALLY FULL SUPPORT

That's the number of major backup services provided by Stromberg-Carlson for railroad communication systems. All you do is order the equipment. Stromberg-Carlson does the rest. This is the rest:

Systems Planning—we'll study your layout, then show you how it can be tied together end to end by a complete system for peak communication efficiency, lowest cost, best service.

Application Engineering—we'll design systems to fit existing network. Your communications people supply the network information and what they need; we supply the tailored system.

Installation—we'll do the whole job ourselves or provide technical assistance to your people. Either way, installation services apply to individual systems or complete networks.

Customer Training—we supply complete descriptions and technical manuals on all our equipment. We can arrange field seminars for your personnel, or they may attend our factory training facilities.

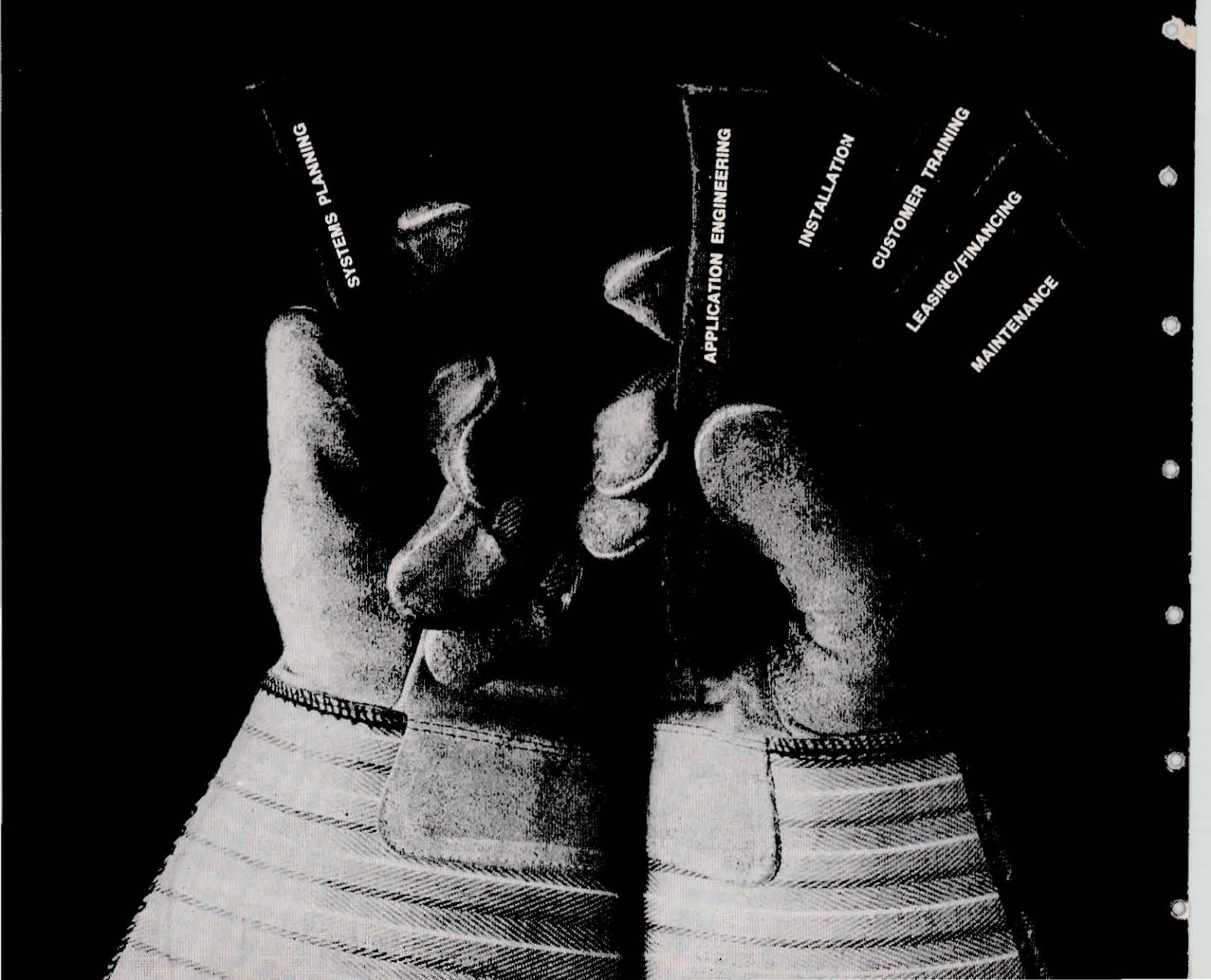
Leasing/Financing—a wide choice of plans and terms to fit your financial needs. Use your own capital or ours.

Maintenance—we stock and ship any replacement part from six strategically located warehouses. You get a field-service engineer any time from six locations across the country. And technical assistance is available from the factory.

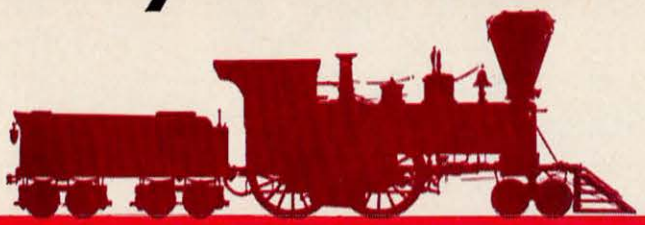
Find out more about all 6 support services by calling or writing the specialists: Industrial Sales, Stromberg-Carlson, Rochester, N.Y. 14603. (716) 482-2200.

Stromberg-Carlson

A SUBSIDIARY OF GENERAL DYNAMICS CORPORATION



THE *FreightMaster*® FORUM



GOOD NEWS ABOUT DAMAGE REDUCTION PROVIDED BY **FREIGHTMASTER** CUSHIONING SYSTEMS

THE LONGEST PACKAGED LUMBER TRAIN IN HISTORY... AND FREIGHTMASTER WAS THERE!

The time: late Winter, 1966. The place: the Pacific Northwest. The event: embarkation of two Great Northern Railway trainloads of packaged forest products, bound for Minot, North Dakota, there to be consolidated into the largest single shipment (144 flat cars) of packaged lumber in history.

Thus began one of the most significant commercial odysseys of our time. Along the way, the train encountered winter-whipped snow and high winds — yet the shipment arrived safe and sound in Minneapolis a few days later, with all packaged lumber intact.

Why did Great Northern undertake such a monumental shipment? Primarily, to prove that packaged forest goods could be shipped across the country on flat cars without damage, regardless of weather conditions.

FreightMaster helped prove it.

Great Northern car #160501 was one of many cars equipped with FreightMasters in the train that provided damage-free movement of the lumber. Even across the slopes of the Rockies, where trains are subjected to continuous draft and buff action, the FreightMaster units demonstrated graphically the high-capacity cushioning capabilities that have made them famous.

This dramatic example of FreightMaster cushioned protection helps explain why more and more of America's progressive railroads are equipping their cars with these low-cost, virtually maintenance-free units. FreightMasters are in service in cars all over the nation, providing the very finest cushioning protection available for every conceivable type of lading.

FreightMaster® A DIVISION OF HALLIBURTON COMPANY

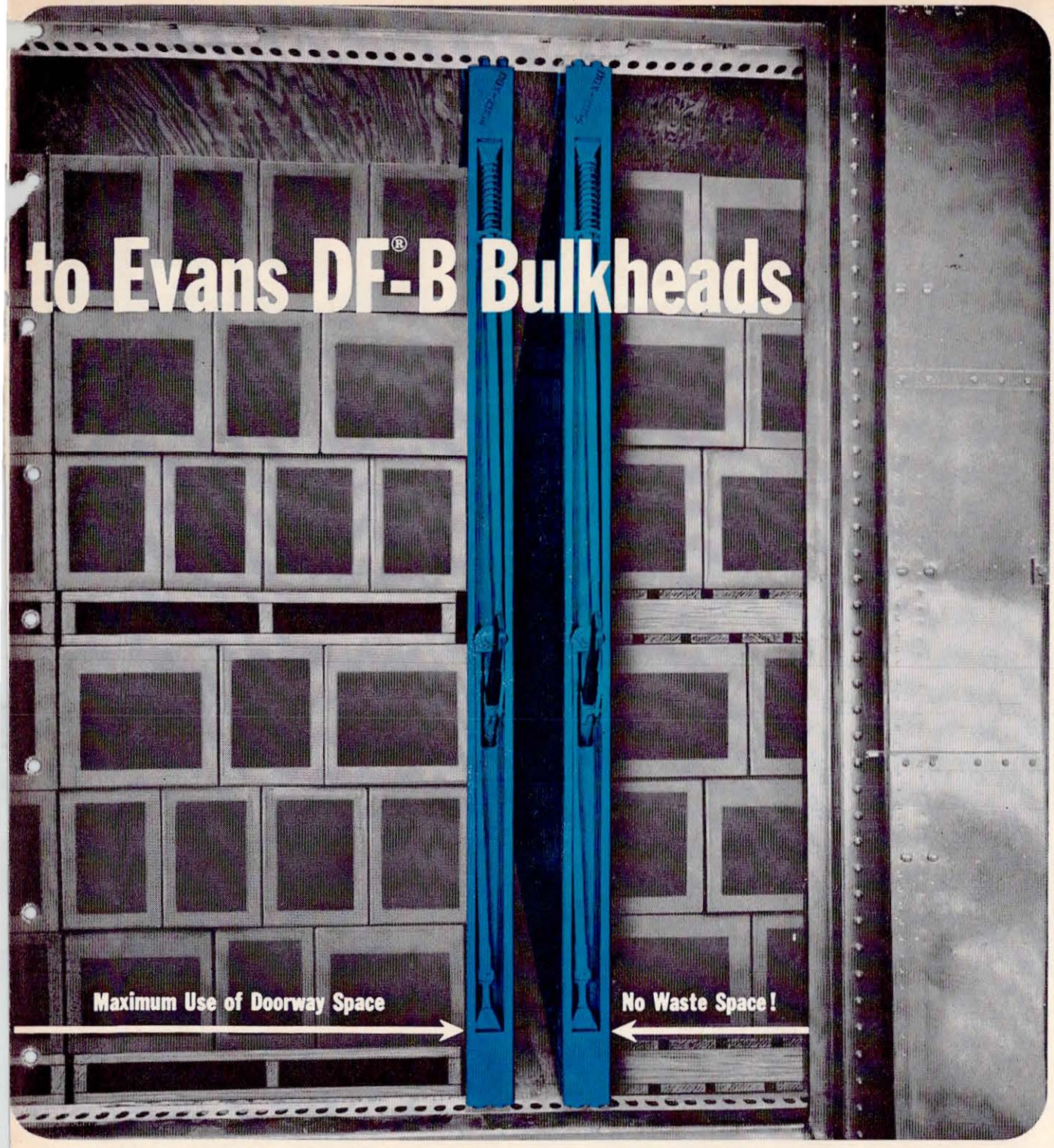
END-OF-CAR HIGH-CAPACITY HYDRAULIC CUSHIONING SYSTEMS

424 West Vickery Boulevard ■ Fort Worth, Texas 76101 ■ (817) ED 5-3046 ■ In Canada, Hawker Siddeley Ltd., Montreal ■ In Mexico, Armendariz S. de R.L. de C.V., Marconi Numero 2-37, Mexico 1, D.F.

NEW! Two-way handle for outside/inside operation. Operating handle at each outer edge of bulkhead pulls through a slot to let operator unlock, move and lock the bulkhead from outside the car. The same handle, when released, drops back through the slot, permitting operation from inside of car. This new handle system has had two years' trouble-free performance in Hi-Cube cars in automotive service. Performance has been so good and the reaction of railroads and shippers so favorable that we have decided to make this handle available on bulkheads used in general service cars, including those in the grocery, paper, chemical, and beverage fields.

NEW! Fine-adjustment positioning chain. Continuous-loop "inching chain," which is optional equipment, permits easily controlled movement of bulkhead for safe, flush positioning against face of lading or away from lading for easy unloading.

NEW! Self-locking for maintenance-free performance. Spring-loaded locking system forces pins to seek the nearest locking position. This assures automatic, positive locking whenever the operating handle is released. The bulkheads cannot move in transit even if the operator forgets to lock them. Fewer moving parts than ever before. Much easier to maintain.



YOU CAN NOW LOAD 56 PALLETS PER CAR!

NO NEED TO WASTE CAR SPACE when car is equipped with Evans bulkheads, adjustable side fillers and staggered oversized doors. **Shipper can load as many as fifty-six 48" x 40" pallets per car.** Evans new two-way handle, self-locking bulkhead reduces amount of space usually needed for operating clearance between bulkheads. Permits virtually back-to-back positioning of bulkheads and maximum use of car space. No hand-loading necessary, even in door area.

evans

TRANSPORTATION EQUIPMENT GROUP
Dept. A-6, Plymouth, Michigan;
Canadian Rep., International Equipment Co., Montreal.
Member RPI and ARCI.

Circle 46 on reader service coupon

IMPACT PROTECTION

for your cars and ladings

MARK H-60

MARK H-100

CARDWELL WESTINGHOUSE *hydraulic-friction* DRAFT GEARS

The Westinghouse Mark H-60 and the Mark H-100 Draft Gears combine hydraulics and friction to provide superior impact protection for your cars and ladings. The velocity-sensitive hydraulic mechanism automatically adjusts itself to impacts with heavy or light loads, high or low velocities. At the same time, the sill force is kept within safe limits. In service since 1963, performance results are excellent!

The Mark H-60 fits all cars having the new standard 17-3/4-inch striker and 24-5/8-inch pocket, travel 3-1/4-inches. The Mark H-100 fits the alternate standard A.A.R. 36-inch pocket using an alternate standard 25-inch coupler, travel 4-3/4-inches.

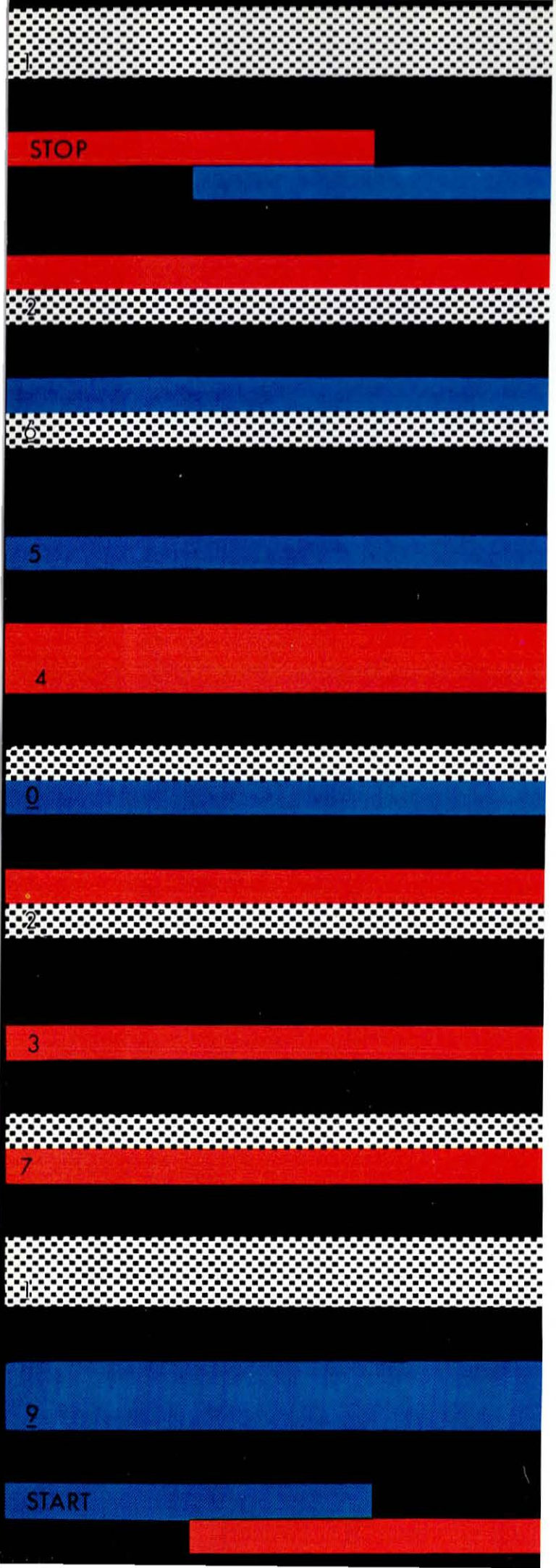
For superior impact protection for your cars and ladings, Specify Mark H-60 or Mark H-100!

CARDWELL WESTINGHOUSE COMPANY
332 SOUTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60604, U.S.A. • TELEPHONE: 312-427-5051
INTERNATIONAL DIVISION SAME ADDRESS
CANADIAN CARDWELL CO. LTD., MONTREAL 2, QUEBEC

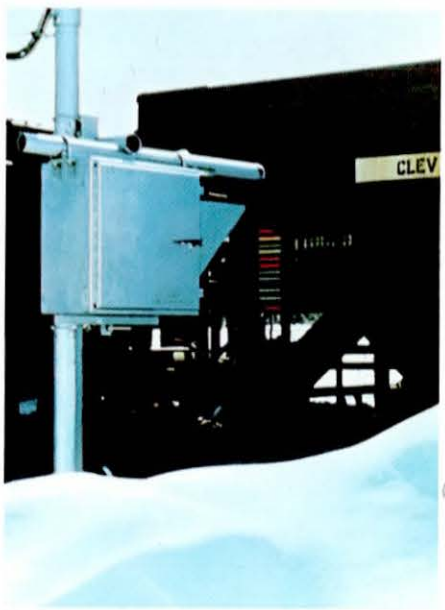
RPI

Why KARTRAK*ACI is the only operationally proven ACI system

*Trademark



In applications KARTRAK*ACI system that has of on-the-line



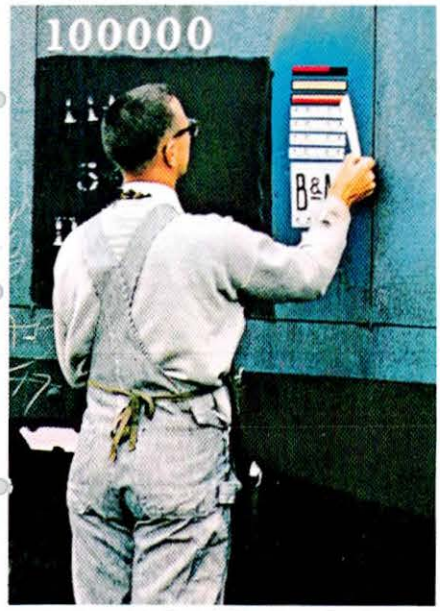
KARTRAK ACI is virtually weatherproof. Ten systems are in operation now, under some of North America's most severe climatic conditions.

Actual applications: KARTRAK ACI systems are now in operation on major railroads throughout the United States and Canada. Unlike ACI systems that are still in experimental and test stages, KARTRAK ACI is operating successfully in actual, day-to-day railroad environments, under all weather conditions. One of our systems is in use one hundred miles north of the Arctic Circle, functioning continuously in spite of the cold and snow.

Sylvania's ACI system will return the best and quickest profit on your investment. Initial costs are substantially below the projected costs of other systems, and permanent car labeling, with Scotchlite® Reflective Sheeting, costs about $2.00 per car.

One major eastern railroad, for example, now has nearly 40,000 hopper cars and over 1,000 road diesels labeled and being "read" by KARTRAK ACI. That railroad

and technical capability, by Sylvania is the only ACI proven itself in 3 years commercial revenue operation.



Application of the Scotchlite retro-reflective label is a one-man operation. The job can be done at track side, quickly and inexpensively.

KarTrak ACI permits full parity—rescanning of the label to assure absolutely precise readings. Depth of field in this system is well over 50".

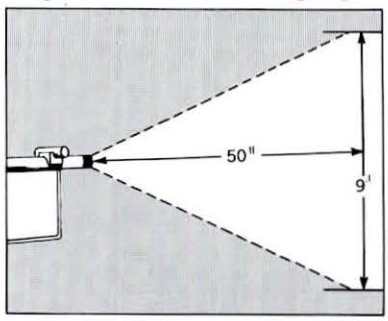
estimates a quick return on their KarTrak ACI investment.

Not only is the cost low, but the Scotchlite retro-reflective label can easily be applied by one man, in one simple step, at track side. With KarTrak ACI, label application tolerances are 120 times less critical than with experimental systems.

Technical capability: KarTrak ACI will give you the most precise, accurate readings obtainable. With KarTrak ACI, railroad data collection centers will tell the time and day of the reading, the car's location, its owners and its registration numbers to match with computer information on cargo type, class of car and destination.

Sylvania's proven KarTrak ACI system has been used both with a simple immediate print-out product as well as in a delayed buffer system which communicates to on-line distant computers.

KarTrak ACI vertically scans and integrates data from the entire Scotchlite retro-reflective label with 4,500 times more energy source in getting light to the label than other systems. Vertical scanning, with a wide oval of light, permits the utilization of 24 times the retro-reflective information of the label than other systems.



KarTrak ACI has been in commercial service for over three years, proving the value of vertical scanning. The 9-ft.-high beam can "read" the label on a car that is barely in motion.

This tremendous light and power source is, however, completely safe. KarTrak ACI scanner originates a safe energy xenon white light of high intensity; there is absolutely no health hazard.

With this vertical scanning system, information can be read from a labeled car that is barely in motion, or moving at speeds up to 80 mph. This feature is currently not available in experimental, non-vertical scanning systems.

The Sylvania scanner encompasses an area nine feet high with a depth of field of over 50 inches. Only one scanner is needed to cover the entire nine-foot vertical area with absolute accuracy.

KarTrak ACI uses a unique decimal code (Stites code) which provides three to seven times more accuracy than systems utilizing five and six level codes. With the Stites code, you get immediate differentiation between piggyback, flat cars and other special cars as well as familiar owner initials and number information in your print out.

***Trademark**

®SCOTCHLITE, a registered trademark of 3M Company.

To fulfill all of your needs for automatic car identification, Sylvania has designed the most accurate, dependable and precise system available today at a cost which will provide a fast return on your investment.
We have not forgotten that your railroad may have special problems and requirements which have not yet been built into the KarTrak ACI system. We've helped other railroads with unique problems and we're ready to solve yours when you are. Please call for additional assistance and information: KarTrak System, Sylvania Electric Products Inc., P.O. Box 268, Bedford, Mass. 01730. Tel. 617-275-0300.

COMMERCIAL ELECTRONICS DIVISION

SYLVANIA
SUBSIDIARY OF
GENERAL TELEPHONE & ELECTRONICS GT&E

What shippers think of market research

Railway men say research calls for many techniques; questioning shippers only one of them.

By GARDNER C. HUDSON

Possibly no single railway activity, in recent years, has received wider or more generally favorable publicity than market research. That, in general terms, may be defined as study by individual railroads or groups of railroads of industries or companies to find out how railway traffic may be increased.

With that background, results of this month's Traffic Poll, as tabulated above, can only be described as "surprising."

This particular Poll was undertaken as a sequel to an article by Dr. Stanley J. Hille, assistant professor of transportation at the University of Maryland, which was published in the Railway Age of April 24. In it, Dr. Hille reviewed results of a personal survey of railway traffic and marketing executives, to determine what research techniques they found most effective, and what types of companies and commodities they considered most susceptible to mutually profitable study.

● **Qualifications.** Poll results are subject, it should be noted, to some qualifying factors, and in fairness to railway marketing people these must be stated.

First, the Poll went, and questions related, only to individual companies; not to industries. Some of the firms which say they have never been surveyed singly may well have been included in industry-wide studies, similar to (but not specifically) the Eastern railroads' paint case of several years ago, or the research into equipment, rates and service which were so outstandingly successful in returning to the rails a large proportion of traffic in new automobiles.

Other companies may have been surveyed on a local, single-commodity or single-movement basis, but not overall. The traffic director of a major Midwestern manufacturer says, for instance, that "limited activity has been carried on at some of our plants after much pressure for improvements."

Unfortunately for a subject of such general importance, the ratio of Poll replies to total number of industrial traffic men queried was smaller than usual—about 20%, against a normal rate of 35-40% or higher. Railway Age therefore refrains from drawing any specific conclusions, but would welcome replies or comments from railway market research personnel.

● **How to improve research.** Railway market researchers themselves would doubtless be the first to admit, however, that there is room for improvement, no matter how widespread or how effective they now consider their work to be.

This makes of special interest the comments and suggestions submitted by some Poll respondents.

One of the relatively few men who considers railway market research to

1) If your company's rate, service or equipment problems have been surveyed, with a view to possible improvements, either by individual railroads or by a railway market research group, what is your opinion of the results and conduct of such surveys?

a) Very effective, and definitely helpful in leading to more attractive rates, better equipment, and/or improved service	4
b) Moderately effective and somewhat helpful	3
c) Of limited effect; productive of very little help	3
d) Wholly ineffective; not helpful in any respect	1
e) Very well organized	1
f) Moderately well organized	2
g) Badly organized	2
h) Never surveyed	30

2) Have such surveys increased the proportion of your traffic moving by rail, either on all or part of your business?

Yes, substantially	2
To a limited extent	6
Not at all	4

3) What, if anything, would you suggest to make such surveys more helpful to shippers, and productive of greater return to railroads?

See following reports on replies.

Internal catalyst; not external surveyor

"Market research, at least in its initial stages, is a case of working behind the scenes. The researcher's primary function is not so much to ask outside questions as to find out what his railroad can do, within itself, for its customers; to bring the parts of his railroad closer together by coordinating the activities of its own departments; to prepare its own personnel for changes which his work shows to be desirable. In short, the researcher is not so much an external surveyor as he is an internal catalyst."

—A railway market research man; name withheld on request.

be "very effective and definitely helpful," and productive of more traffic, thinks the approach taken by some railroads should be extended. "Quite a few carriers," he writes, "have industry specialists both in sales and rates. If, so far as possible, all carriers did the same it would improve rail rates, service and equipment. Through these men, they can approach the problems of a particular industry more intelligently."

The most detailed suggestion comes from a prominent Eastern traffic manager. "Carriers should individually conduct commodity surveys on their principal origin commodities, and turn the results of such surveys over to the shippers of such commodities for their com-

How one major railway conducts market research

"Certainly the industrial traffic manager is a factor—a highly important factor—in any intelligent railway marketing activity. But sometimes it may be better not to approach him until we ourselves have carried the research far enough so we can present a reasonably concrete package of rate, service and equipment proposals. A shipper survey is only one of many sources of information we use in railway market research. We try not to bother busy TMs with a lot of questions, some of which may be unnecessary, or which we may be able to answer from other sources."

"Don't forget that market research is still relatively new on many railroads, even on some of the most progressive. The first step in any research program is internal —to find out what you have and what you are already doing. Some railroads haven't yet completed that internal stage, and aren't ready to go outside. Other railways, as of now, just don't have the research personnel to reach more than a handful of their customers."

Those two paragraphs cover the gist of answers given by two experienced railway marketing men to a Railway Age editor who put to them the question which inevitably arises in the wake of this month's Traffic Poll:

"If railways have done as much as they claim in market research, why have three out of four companies never been surveyed?"

Both the men queried are with the New York Central, which has probably been engaged in market research as long, as deeply and as successfully as any single railroad. It has today in its Marketing Department specialists or specialist groups on automobiles, metals, construction materials, agricultural products, chemicals, paper, foods, consumer goods, Flexi-Van, international freight, and even refuse.

One of the men interviewed was Joseph M. Ostrow, whose appointment as assistant vice president—market planning and research, was announced just as this issue of Railway Age was going to press. The other was Paul H. Moore, named director of market research last February.

"It may well be," they agreed, "that three out of four industrial traffic managers have never received a direct questionnaire labeled 'market survey,' and never been asked a lot of questions by a man titled 'market researcher.' But that does not mean their firms have never been studied at least indirectly or as part of their industry. We on the Central, for example, use such oral or written questionnaires, but we use them only sparingly, because they tend to be slow, costly and time-consuming. They are not necessarily the first or most important step in a market survey.

"We need industrial intelligence in research work. But, as in gathering military intelligence, we get it where we can.

"There are many sources—our own records, special libraries, trade associations, universities, observation of operations, reports from our own field forces in freight sales and operating departments. We think they are pretty well marketing-minded, and, collectively, they tell us a lot. Then we often get very valuable information from production, sales, marketing or research departments of shippers or from receivers of their products.

"Our primary function in market research is to provide basic data for decision-making by our own company. To do that, we have to know first and foremost the economics of a shipper's whole business. Without such knowledge we could not make meaningful recommendations for new equipment, new rate bases or new service patterns. Nor could we get down to individual cases.

"Take, for example, the development of Flexi-Flo service for cement. Before we could even dream about it we had to analyze the economics of the cement industry. Then we had to do a lot of paper and pencil calculations to develop the economics of alternative cement distribution systems. Then we had to work with our mechanical people to engineer the Flexi-Flo car.

Of course it all took a long time, but until we had been through the whole process we couldn't go to individual companies to see what they thought of it. If we had gone to a cement company traffic manager at the beginning and asked him if he would use Flexi-Flo service, he couldn't have told us, because he just didn't know what Flexi-Flo was. And frankly we couldn't have told him, because at that time we didn't know either.

"That point of time comes up again and again in market research work. For instance, back in 1962-63 we made a detailed survey of iron and steel products, complete with personal interviews with some 200 or 300 receivers of such products. We found out pretty quickly that loss and damage, car supply and unloading costs were some of the main points militating against rail shipment. But our new 'breadbox' cars designed to overcome those problems only began to go into service last year. And just within the past weeks we filed a rate proposal that had its origin back in that 1962-63 survey.

"A survey today and results tomorrow just aren't always possible. That's true anywhere, but especially on those roads that are just getting into market research, or that have only limited personnel engaged in it. That may be why some of your Poll respondents say their companies have been surveyed, but they have never been told the results.

"It could be, too, that some surveys have revealed nothing that could be done to help either shipper or railroad. Market research is, after all, a two-way street. Surely it should help the shipper, and on the Central we know it has. But it has to help the railroad, too, by increasing net income. If it doesn't, we couldn't justify our work—nor in the long run could we help the shipper either."

ments as to shippers' needs and competition (product, shipper and carrier). They should then re-analyze and take such action as is necessary to set up compensatory rates that will encourage greater tonnage movements.

"Added net revenues can be secured by volume movements, increases in minimum weights, multiple car rates, incentive rates and other means, making overall rate increase petitions unnecessary."

A Midwestern traffic man reports that his firm's operations have been surveyed by individual carriers with moderately effective results and some increase in rail traffic. He believes, however, that "a more concerted and cooperative approach by carriers would prove beneficial, particularly in the areas of car supply and incentive rates. Greater unity on the part of the carriers would promote a more cohesive system."

● **Be specific.** "Be specific in your conclusions, with statements in writing as to changes put into effect," advises the traffic manager for a Midwestern manufacturer of heavy equipment. His company, he says, has been studied, but with only limited results and no increase in rail traffic. "A great amount of good information was collected," he notes; but he was, apparently, never advised of conclusions drawn or actions taken.

An Ohioan whose firm was surveyed with moderately effective results and some increase in its rail traffic, agrees that carriers should "really inform the industry of the actual results of the surveys.

● **Help shippers, too.** At least two traffic men whose companies have been surveyed with "indifferent or poor" results think the carriers are solely interested in helping themselves — not shippers.

"The marketing people we have received," says one, "seem only to be interested in helping solve the railroads' problems, or increasing their revenue."

The second writes that they should "approach the matter by trying to ascertain what they can do better to serve shippers, rather than merely making a survey of tonnage moving in an apparent effort to increase their share."

Another man states that his company has not been surveyed by railroads. But he goes on to say that "our tonnage is under continual survey by review of reports as received from plants and depots for monitoring rates and routes for optimum transportation, and developing reasonably optimum costs." The latter, he notes, "have not been obtained, usually because shortages of box cars or unsatisfactory box car transit times have required use of premium transportation." ■

LUTHER MILLER

AS THE EDITOR SEES IT...

THAT OLD DOUBLE STANDARD—Conservatives can be the oddest people. Generally speaking, they are against any special-interest raids on the Federal Treasury. But not invariably. There seems to be a double standard that goes into effect whenever certain segments of the transportation community line up for their dole.

A recent editorial page of that staunchly conservative organ, the New York Daily News, provides the latest evidence of this phenomenon.

Two of that day's three editorials zero in mercilessly on the Rural Electrification Administration. The substance of the sermon is this: "The House [of Representatives] should be looking for means to kick this coddled, overblown lout away from the public trough."

The third editorial is entitled "Delays en Route," and it's all about the problem of overcrowded airports—which is costing the airlines "41 million a year in crew overtime and wasted fuel."

The News is especially concerned about the need for a fourth jet-port for New York City, and asserts: "It's time the various governments and agencies concerned stopped dawdling, picked a site and started to work."

Our question is: How do you distinguish one coddled, overblown lout from another?

A CUB WHO MADE IT BIG—Half a century ago, a cub reporter in Toronto was assigned to cover an appearance by Billy Sunday, the flamboyant evangelist who spoke often and hopefully of the day he would cast off these mortal coils and approach the pearly gates. But Billy Sunday didn't show up, having just gone through an emergency appendectomy. The cub then wrote a story that began: "The doctors have once again prevented Billy Sunday from achieving his life's ambition—going to heaven."

That story never got into print—but it is one of the few failures recorded in the long and distinguished publishing career of John R. Thompson.

The urbane wit and resourcefulness evidenced at so young an age served Jack Thompson well as he pursued a career that demanded a combination of editorial savvy, publishing acumen, and the ability to make friends and influence advertisers.

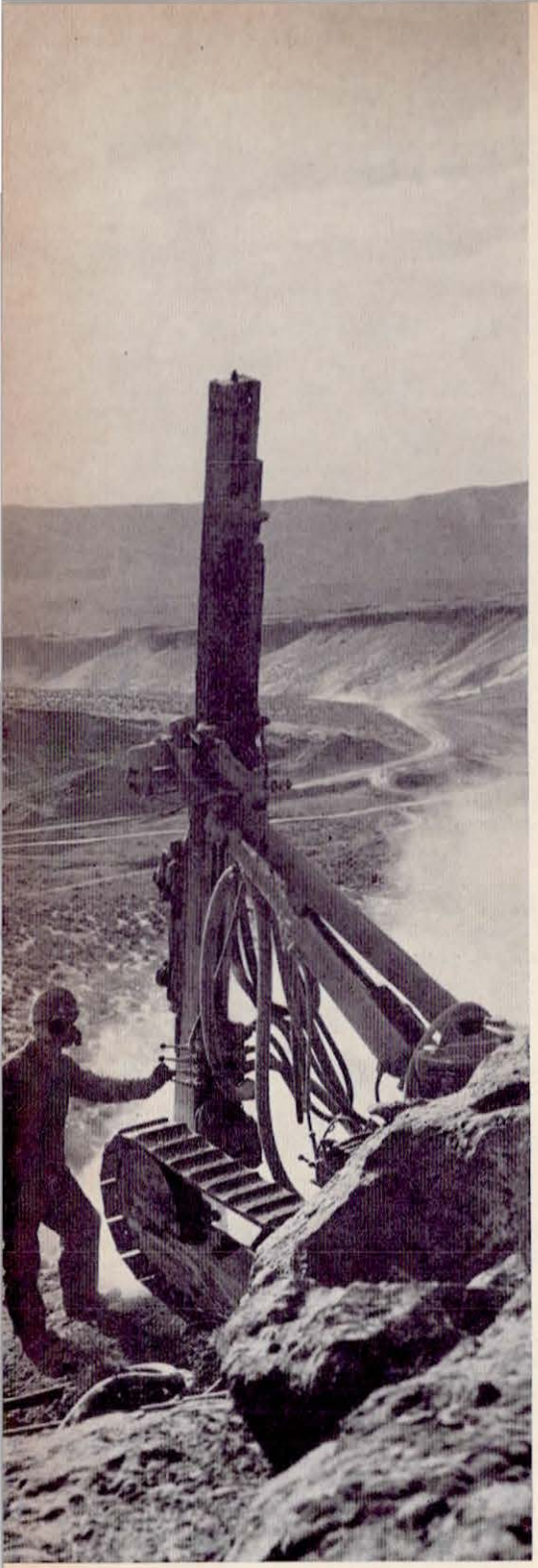
For 22 years Jack was with Canada's prestigious Maclean Hunter Publishing Co., rising to the position of vice president, U.S. operations. He came to Simmons-Boardman 19 years ago, quickly earning the title of "Mr. Railway Age" in the Chicago area. He will retire July 1—two years beyond the normal retirement age—as vice president in charge of Simmons-Boardman's Chicago office.

It is not likely, however, that Jack will soon retire from the hearts and minds of the Chicago railroad community—especially that circle of railway suppliers in which he moved so well and so easily. He will be remembered for many things, not the least of them being his work with the Railway Progress Institute from the day it was founded.

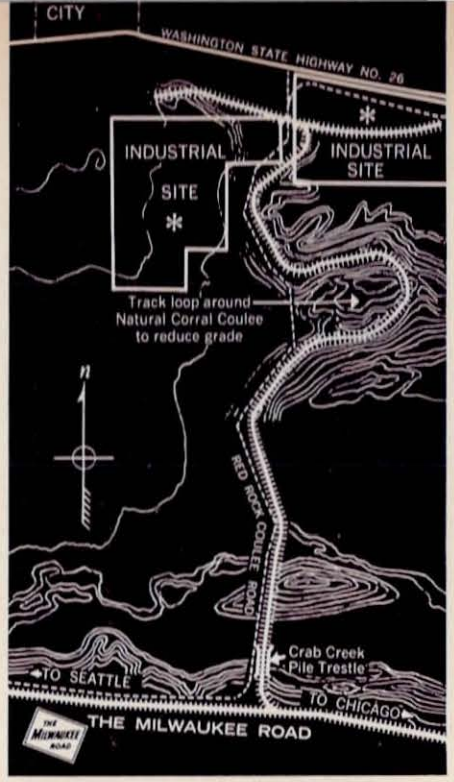
THOMPSON

Like any good manager, Jack has trained and left behind a strong team. We know, from personal observation, that he has schooled his successors well in his own publishing philosophy: *You've got to put more into an industry than you ever expect to take out of it. You must serve a customer before you can ever hope to service him.*

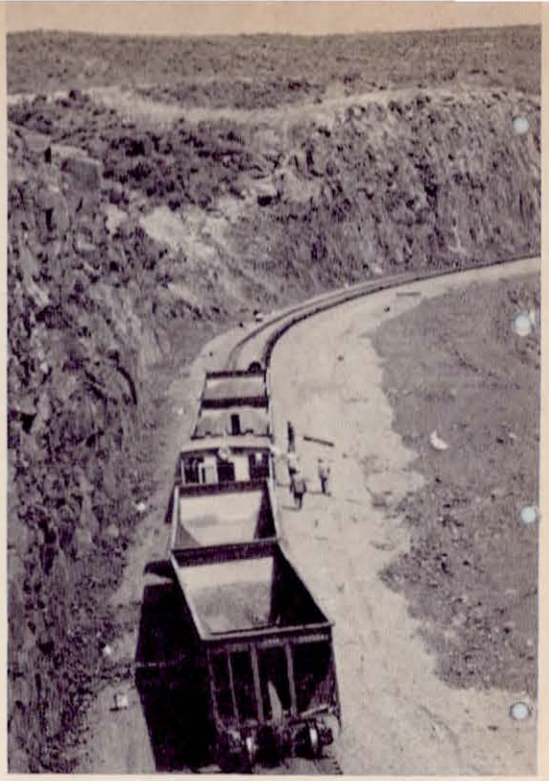
We also hope that he has communicated some of his story-telling ability to our Chicago-based editors. It isn't that Gus Welty and crew really need help; but Jack's Billy Sunday lead is hard to beat.



A ROCK DRILL goes to work on one of the toughest parts of the line construction, at Natural Corral Coulee.



NEW LINE joins the main line.

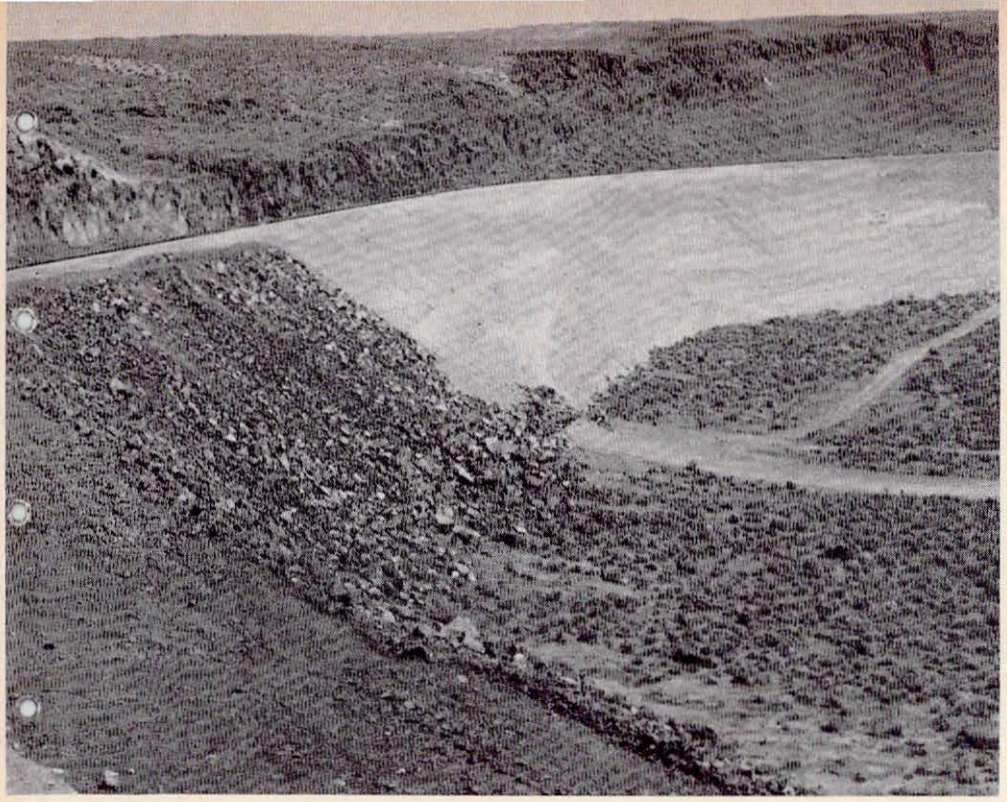


ENGINEERING PROBLEM WAS SOLVED with

Milwaukee has high hopes for a new 6.4-mile line

Shippers in the Royal Slope area of Washington state needed a fast rail connection to market. So, Milwaukee Road built a line to serve the area—a region that shows promise of developing as an important agricultural-industrial complex.

MILWAUKEE PRESIDENT Curtiss E. Crippen opened the new route at ceremonies attended by 3,000 persons at Royal City (pop. 568).



a half-mile, 85-foot-high fill to carry the line on a 2.5% grade.

Not so many years ago, the Royal Slope area of Washington state was called "a land of promise and a graveyard of hopes." Today, they're trotting out the promise again and ripping up the graveyard. Irrigation has made the Royal Slope a productive and potentially rich area. And the Milwaukee Road is in there with a new branch line to provide the direct rail transportation which the agriculturally-oriented economy needs.

As such things go, the line from the Milwaukee's main to Royal City, Wash., is ordinary. It's just 6.4 miles long. It cost $1 million. It's conventionally-built—no concrete ties, no welded rail. But to the Milwaukee and to the Royal Slope, it's something special. As President Curtiss E. Crippen noted at recent official-opening ceremonies, "a great deal of Milwaukee Road faith was pounded into these ties along with the steel spikes."

• **Why so important?** What does it all mean? Why did the railroad stage a gold-spike ceremony in a town of 568 population? Royal Slope, as Milwaukee traffic men point out, contains more than 90,500 acres of land susceptible to irrigation. About 70,000 acres are now receiving water and are in production, and irrigation will come to the rest of the Slope area in the future. But until the railroad came, there were distribution problems.

Vegetable crops produced in the area had to be truck-hauled to points 25 or 30 miles from Royal City for processing, packing and shipping. Fruit grown on the Slope had to be trucked 65 miles to Wenatchee or 92 miles to Yakima—and these crops are coming to be a major part of the area's economy, with most trees just beginning to come into commercial production.

As Milwaukee people saw things, optimum marketing of the crops required establishment of rail-served processing, packing, freezing and storage plants near the producing areas. And so, in December 1965, the railroad applied to the ICC for authority to build the Royal City line, from a point near Smyrna, Wash., on the main line between Spokane and Seattle.

• **High hopes.** A number of food-processing companies had already indicated willingness to invest in rail-based plants in the area. And as then-President William J. Quinn put it in 1965, "It's anticipated that the area adjacent to Royal City to be served by the proposed line will become a major point for the location of such facilities and for the making of outbound rail shipments, either in the raw state or after processing, and for receiving inbound shipments required for production and processing."

When Milwaukee filed application on the Royal City line, it also filed for authority to build a 22.5-mile line in the same general area to serve the Wahluke Slope agricultural development. Northern Pacific, however, also had an application on file to build a branch line into the district. At this point, neither Milwaukee nor NP has received ICC approval.

All these moves—relating to both the Royal Slope and the Wahluke Slope—reflect a continuing and an increasing interest in the area's agricultural production.

• **Industry's welcome.** Despite the good prospects for agriculture, however, Milwaukee is putting more in its marketing basket than fruit and vegetables in their native state. Two industrial districts have been laid out at Royal City, for agriculture-related and other industries. One, the Hiawatha Industrial District, was set up by Milwaukee Land Company, a railroad subsidiary; the other is sponsored by the Beverly-Royal City Port District.

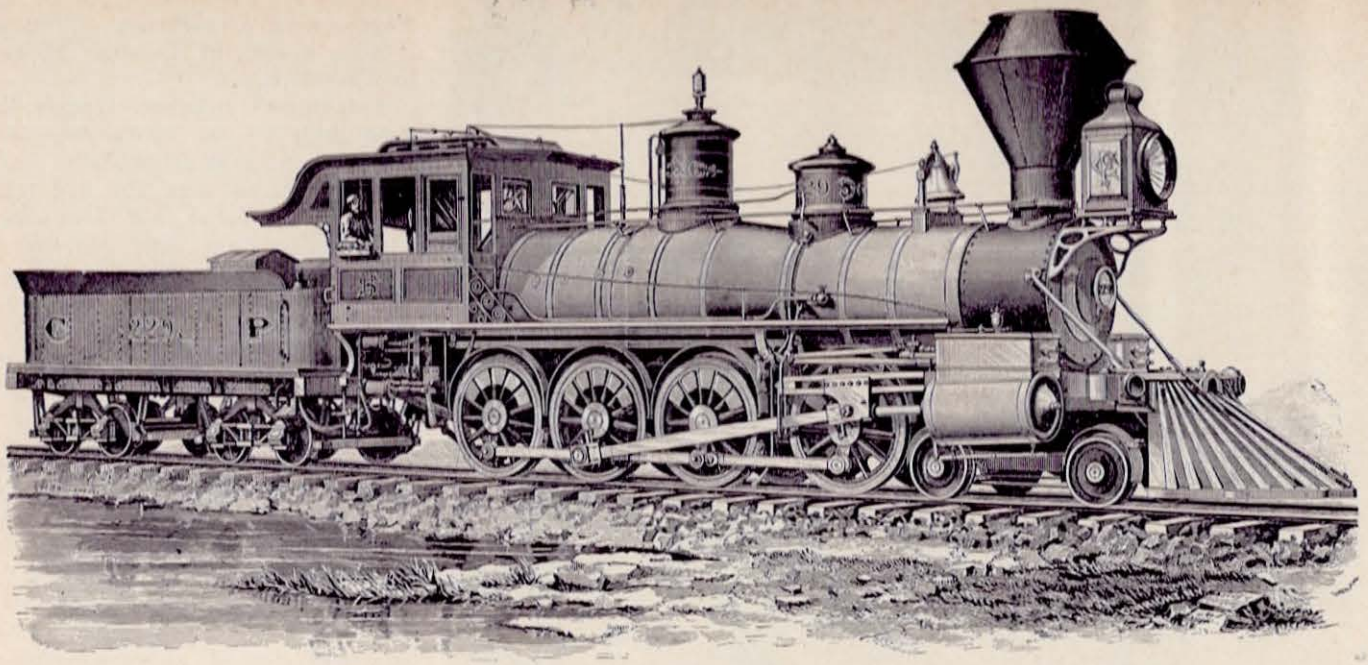
Until now, Milwaukee people say, growers have been discouraged from going into commercial production of certain crops because of the problems of trucking them long distances for processing. But as Crippen noted at the line dedication, "it's our hope that having the rail head in the heart of the producing area will encourage production of crops such as potatoes, onions, apples and other fruits and vegetables susceptible to rail movement. The Milwaukee will be making a concerted effort to attract to the Royal Slope area a wide variety of industries engaged in fruit and vegetable processing."

Construction on the new line began last November—and, as engineering forces might testify, it wasn't a picnic getting rails to Royal City.

T. M. Pajari, division engineer at Tacoma, supervised the operation; Dravo-Degerstrom, Inc., of Spokane, did the actual construction. Most difficult engineering challenge was getting the railroad around a deep ravine known as Natural Corral Coulee—a challenge met by Milwaukee and its contractor with construction of a half-mile, 85-foot-high fill with a 2.5% maximum grade.

The second branch which Milwaukee wants to build in the Columbia Basin would be a line from Beverly, Wash., south through Mattawa. The Wahluke Slope, which this line would serve, is also regarded as one of the most potentially productive areas in the Basin. A canal, now under construction, is expected to bring water to 15,900 acres by 1969. An additional 31,500 acres are to receive irrigation in 1970-71.

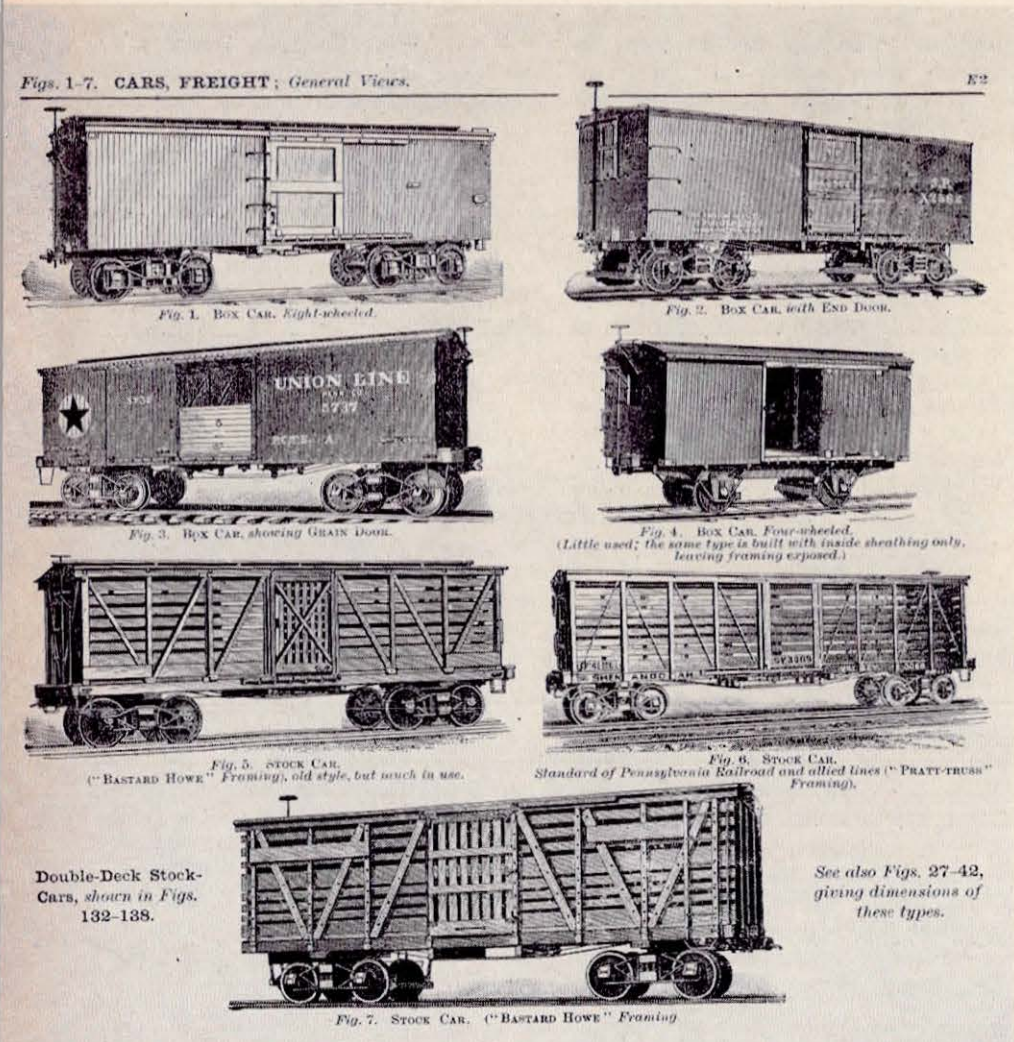
That's for the future, however, and for the time being Milwaukee will be concentrating on traffic development from the Royal Slope line. Off the initial reaction, things look good: Interest in the industrial districts is reported high; and more than 3,000 persons turned out, in the little 568-population community of Royal City, for the branch-line dedication—and the barbecue which, thoughtfully, was scheduled to follow. ■



IRON HORSE OF YESTERYEAR
This twelve wheeler built at Central Pacific's Sacramento, Calif. shops was the largest and heaviest in early 1880s.

AAR's Mechanical Division heads

Mechanical department men see need for joint action in solving current problems which respect no divisions of authority.


Figs. 1-7. CARS, FREIGHT; General Views.
E2
UNION LINE
Fig. 1. Box Car. Eight-wheeled.
Fig. 2. Box Car, with End Door.
Fig. 3. Box Car, showing Grain Door.
Fig. 4. Box Car. Four-wheeled. (Little used; the same type is built with inside sheathing only, leaving framing exposed.)
Fig. 5. Stock Car. ("Bastard Howe" Framing), old style, but much in use.
Fig. 6. Stock Car. Standard of Pennsylvania Railroad and allied lines ("Pratt-truss" Framing).
Double-Deck Stock-Cars, shown in Figs. 132-138.
Fig. 7. Stock Car. ("Bastard Howe" Framing
See also Figs. 27-42, giving dimensions of these types.

PAGE FROM THE PAST

Mechanical Division's predecessor, the Master Car Builders' Association started the Car Builders' Dictionary. This page from the 1884 (second) edition shows freight cars of that era. The book has been published ever since in cooperation with the division. Now known as the Car and Locomotive Cyclopedia, the 22nd edition was printed in 1966 by the publishers of Railway Age—who have handled its production since 1912.

BIG EQUIPMENT OF TODAY

Fast piggyback service typifies growing demand for high-horsepower locomotives and specialized cars.

into its second century of service

The AAR's Mechanical Division is looking ahead to a second century of significant contributions to the railroad industry. While doing so, it is pausing briefly this week during its annual business sessions at Chicago to celebrate the formation 100 years ago of the Division's predecessor, the Master Car Builders' Association.

Meeting today's and tomorrow's equipment needs confronts the Mechanical Division with design problems far more complex than those facing mechanical department men a century ago. In those days the lack of car design standards was crippling the first attempts to interchange freight cars between railroads. This obstacle to car operations beyond the geographical limits of any one railroad could be resolved pretty much by carmen alone. But today the Mechanical Division recognizes that freight-car design and operation involve conditions requiring full cooperation among traditional divisions of the railroad industry.

● **Big car problems.** The Mechanical Division is aware that the freight car is no longer just a means of moving freight from here to there at the convenience of the railroads. Shippers demand, and railroad marketing folks insist on, equipment geared to shippers' production lines and their distribution system. The high-cube cars and the high-capacity unit-train cars answer customer-oriented needs and competitive requirements. But this new generation of big rolling stock has also developed undesirable tendencies during movement which serve as a warning that future car developments in capacities and configurations must be made by close cooperation between equipment and track men.

Deficiencies in current car designs will not stifle development. If economics dictates progress to a plateau beyond the jumbo cars now in service, mechanical department officers are certain that the goal will be achieved through cooperative effort. They know, however, that critical factors must be identified and handled jointly by car designers and roadway engineers.

● **Old cars a target.** Getting old cars off the rails is perhaps as great a challenge as putting new equipment on them. Cars, unlike wine, do not improve with age. Vintage cars, built for another era, are incapable of safely coping with the stresses encountered in high-speed and high-tonnage service.

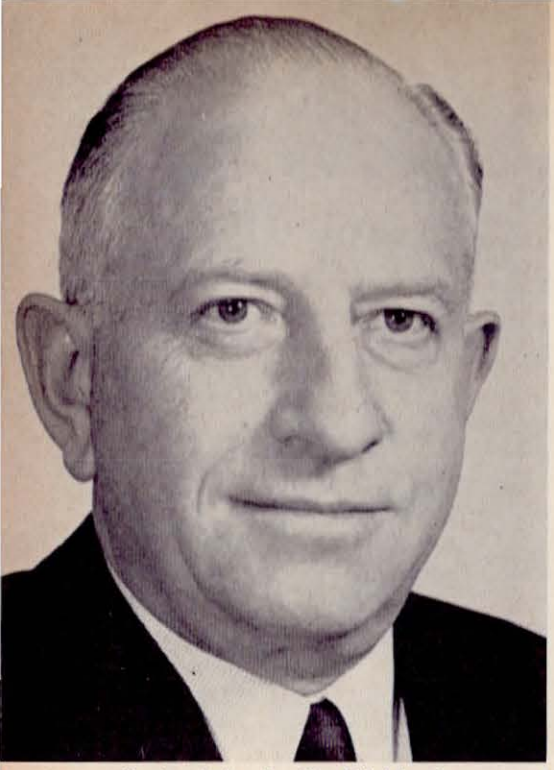
Recognizing that the continued operation of such cars could be disastrous, the Mechanical Division has their orderly retirement as one of its principal objectives. More than that, it is seeking ways to assure that, once retired, the aged rolling stock does not reappear on the rails unless rebuilt to specifications meeting safe operating requirements.

● **How Division operates.** Attaining these goals will be feathers in the caps of mechanical department men. But the Division's work, marked by outstanding accomplishments, also involves routine assignments and chores that require the specialized talents of many railroad men — and a permanent staff. T. T. Blickle, Santa Fe's general manager-mechanical department, heads the 16-member General Committee that supervises division affairs. And 165 railroad men serve on the 14 specialized standing committees.

Executive Vice Chairman William H. Chidley heads up a permanent staff coordinating the Division's operations. Located at 59 E. Van Buren St., Chicago, this group implements the work of the standing committees, maintains liaison with the railroads, private car lines and supply companies.

● **Good will ambassadors.** Through its staff and committee members the Division does much more than handle routine business and special tasks. Perhaps their role in serving urgent needs of shippers is one of the least known aspects of their work. They constantly rub elbows with the railroads' customers while solving both car requirements and developing hardware for securement of ladings.

In doing so, the Division's personnel deal regularly with many organizations representing probably a majority of the shippers. Among these are the Western Wood Products Association, American



Santa Fe's T. T. Blickle is present Chairman of AAR Mechanical Division.

William H. Chidley heads Division's staff as Executive Vice Chairman.

Frank H. Stremmel serves as Secretary at Division's Chicago headquarters.

Iron and Steel Institute, Southern Pine Association, Farm and Industrial Equipment Institute, Military Traffic Management and Terminal Service—Department of Defense, Road Machinery Traffic League and the American Pulpwood Association.

Important government and railroad-oriented groups are also served by the Division. These include the Interstate Commerce Commission, Board of Transport Commissioners of Canada, Railway Association of Canada, State Railroad Commissions, American Railway Car Institute and the General Managers Association. And its collaboration with nine engineering committees which develop and manufacture cars, car components and supplies and locomotives is work that has produced excellent results for the railroad industry.

● **How it began.** These varied Mechanical Division activities were acquired gradually since those farsighted carmen started the Master Car Builders' Association in 1867. In the early days, efforts were concentrated on getting car design on an acceptable basis that would speed both car movement in interchange and car repairs when off home rails. The MCBA directed its attention to developing standards for critical car parts such as draw gear and couplers, wheels and axles, and air brakes. Standards were not developed overnight but gradually as agreement could be reached on component design.

The Interchange Rules, first introduced in 1872, became the prime working tool in making standards effective. Up to and including 1885, these rules were a responsibility of special railroad representatives; after that date they were handled by the MCBA. In 1886 provision was made for a binding method of settling disputes, a duty since performed by the Arbitration Committee established in 1887.

Prior to 1890 the rules required that repairs to foreign cars be in accordance with original construction. But in that year repairs and movement of cars were speeded by adoption of a rule permitting use of MCBA standard components when they did not impair the original strength of cars. In 1895 repairs were made chargeable to car owners for the first time without authorization from the owners, except when the car had been derailed or wrecked.

The Interchange Rules have been regularly revised ever since. They continue to be recognized and known as the "backbone of the railroad industry." Safety in operation is interwoven into the rules and remains as a prime consideration as the rules are revised to meet changing operating needs and to incorporate car construction improvements.

● **Mechanical Division formed.** On March 1, 1919, the Mechanical Division was created as a part of the newly organized American Railway Association. Key organizations in its formation were the Master Car Builders' Association and the American Railway Master Mechanics' Association.

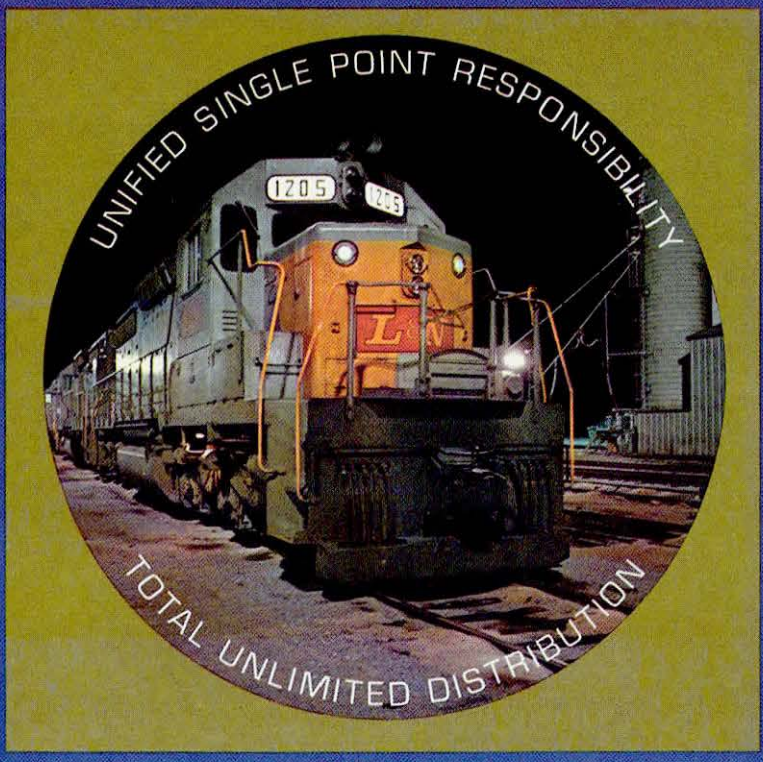
The latter's history is impressive and almost as lengthy as that of the MCBA. Organized in 1868, it dealt with the important steam locomotive whose designs were almost as numerous as cars and as varied as the whims of their designers. It was this lack of standardization, and the fact that they normally operated only on the owning railroad's rails, that makes the Mechanical Division story primarily one about cars. It was this lack of standardization, too, that was a primary factor in the rapid replacement of steam by diesel power. But the amalgamation of the two associations was a natural one because, by 1919, many mechanical departments were headed by a general superintendent of motive power and equipment with supervision over both locomotives and rolling stock.

Since consolidation as a part of the AAR organization serving all facets of the railroad industry, the Mechanical Division has consistently met its basic objective—to meet the equipment needs of the industry. The Division has done this through its committees' handling of thorny design problems, through its insistence on adopting constructive measures for the industry's good.

● **Research activities.** Research is recognized as a necessity in progressive industries. Before 1938 the Mechanical Division had to rely on research done by individual railroads and by equipment suppliers. Their contribution was then and continues to be of utmost importance to the industry. But in 1938 the Division acquired its first mechanical engineer to coordinate investigations of troublesome problems. His work was conducted without benefit of formal research facilities but this situation was changed when the AAR Research Center was completed.

W. M. Keller was named director of mechanical research for the Division in 1953. He became AAR's vice president of research in 1958 when all the AAR research activities were consolidated into the Research Department. Under his direction significant mechanical projects have been completed. These include studies of passenger-car ride comfort, tracking of long cars, cushion-underframe ratings, freight-car truck riding problems, journal-bearing research, center-plate lubrication investigation and many others.

Research continues as the Mechanical Division fulfills its mission of designing future cars for successful operation in interchange. ■



One Source for every transport need . . .
. . . that's L&N Distribution Leadership!

"Flexibility" is the key word in L&N's total program for its shippers.

If you are shipping to or from the Mid-South, across the nation or overseas, L&N's unlimited distribution service delivers a single source, completely integrated freight plan to fit your needs.

L&N offers new cars, new terminal facilities, new specialized equipment, new direct access, real time, computer telecommunications and coordinated scheduling.

The knottiest transport problems are unraveled for you through utilization of specialized rail equipment, piggyback, and containerization. L&N coordinates rail, highway and ocean transportation, even arranges warehousing and distribution market-by-market.

You achieve L&N's "3-S" advantages . . . Service, Speed and Savings, programmed by men who understand the logistics of total marketing. Call today, L&N's Freight Traffic Specialists are ready to meet every challenge.

L&N

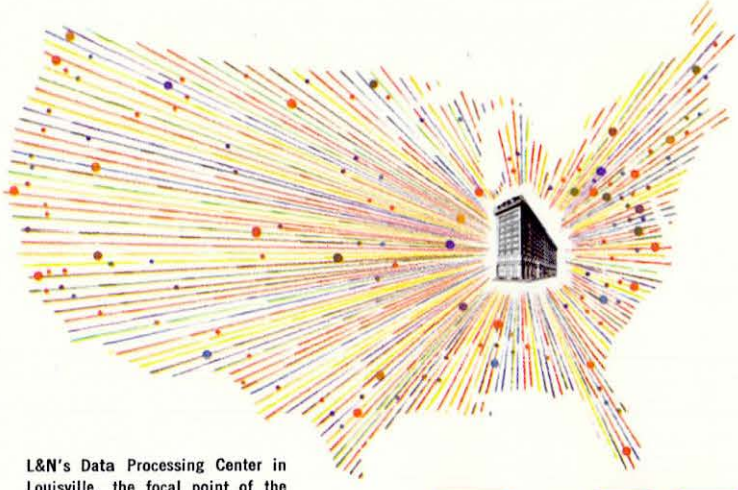
LOUISVILLE AND NASHVILLE RAILROAD

First railroad in the nation to offer "Shipper to Computer" Direct Inquiry Car Tracing...now on REAL TIME!

HERE'S HOW YOU BENEFIT: As an L&N shipper, you can locate any freight car on L&N lines . . . instantly! Your own Telex or TWX sends its request directly to L&N's "Real Time" Data Processing Center in Louisville. Immediately, without human control, L&N computers verify your request, locate your car, relay the message to your unit, **in your own office.**

L&N was first across the nation to provide this instantaneous car tracing service. Now, with "Real Time" service, L&N shippers benefit even more.

Find out how L&N Teleprocessing can help your total distribution program. Call your L&N Freight Traffic Office.



L&N's Data Processing Center in Louisville, the focal point of the L&N Direct Inquiry "Real Time" Car Tracing System.

L&N

Melons via TOFC show a profit

Piggyback has cut L&D claims for rail watermelon traffic.

WATERMELON TRAFFIC is showing good growth for Southeastern roads.

Not so very long ago railways were probably the best customers of Florida watermelon growers—but they were buying only damaged melons. That's because freight claims on melon shipments ran to 50% or more of total revenue. For every million dollars they took in, railroads were paying out more than half a million in claims, over and above the normal operating cost of handling the melons. As almost any businessman knows, there's no percentage in that. So, in effect, the railroads had virtually taken themselves out of watermelon haulage—despite its high revenue potential.

There has been a dramatic change in the past few years.

Watermelon traffic, which was nearly all moving by truck in the early 1960s, is now firmly established for rail haul on a TOFC basis. Under so-called Plan 2½ (on a ramp-to-ramp basis), railroads have stopped paying any claims at all except when a wreck occurs—or on the occasional movement of melons in box cars.

● **Other factors.** While elimination of freight claims through use of TOFC service was the principal reason for return of this now-profitable traffic to the rails, there are also a number of other factors involved. Railroads were easily able to beat highway haulers on rates and service, once the nagging drain of claims was eliminated. Shippers are also able to load up to the stanchion capacity of a car, 65,000 lb or more. Actually, some 45,000 to 50,000 lb is the average load. At 45,000 lb the railroads haul a car of watermelons from any given point in Florida to say, Chicago, for $600 less than the truck rate. Even after pick-up and delivery charges of approximately $50 at each end are added, this still leaves a considerable margin of profit for the shipper.

The fourth-morning delivery is also attractive to northern destinations, particularly since, if the shipper delivers the trailer early enough, third-morning delivery is usually made. This service and these rates have not only produced an increased amount of traffic for railroads, but have also increased the market for watermelon growers. For example, watermelons grown far South in the Everglades are the principal reason for the prosperity of such towns as Immokalee, once a forlorn little spot deep in the Everglades; now a bustling agricultural center with a rapid growth rate.

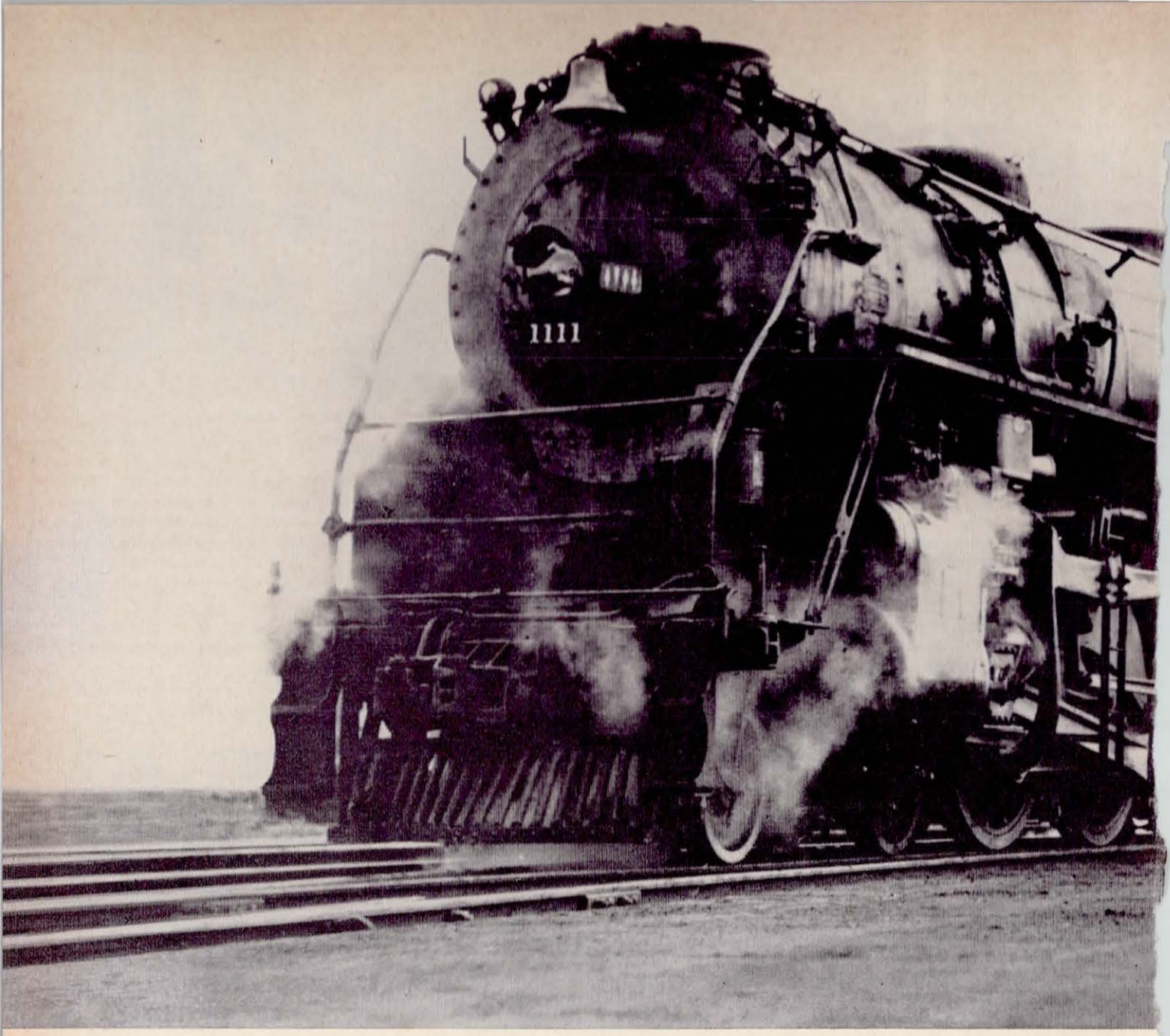
● **How movement has grown.** What has happened can best be portrayed by quoting statistics of movement on the Atlantic Coast Line, which are similar to those of the Seaboard and representative of the change back to rail. The year 1964 was the first time any quantity of melons moved in TOFC service. The Coast Line then hauled 985 trailers during the growing season, with a total revenue (including box car movement of melons) of $381,000. Of this about a quarter-million dollars was paid for piggyback haulage. In 1965, both revenue and number of trailers handled nearly doubled. That year, the Coast Line moved more than 1,700 trailers, with a revenue of $477,000 on watermelons, nearly all of it from piggyback traffic. Last season, the traffic nearly doubled again, with 3,300 trailers and $807,000 in revenue. This year, 6,000 trailers were expected, with $1½ million in revenues if the area gets sufficient rain.

The above figures take on an added lustre when claims are considered. In 1964, when much of the movement was still in box cars, the awesome total of 50.4 cents paid out in claims from each dollar received in revenue cut deeply into profits, if, indeed, an actual loss did not result. In 1965, the figure had been drastically cut by a greater movement of watermelons in trailers, but it was still at the unsatisfactory figure of 16.6 cents in claims per dollar of revenue. By 1966, however, the figure was down to 3.8 cents, and this was almost entirely represented by a single accident where several flat cars carrying watermelon trailers were derailed. Almost all melons will be hauled this season in trailers, on a ramp-to-ramp basis, with no claims paid unless an accident should occur. Thus, in only three years claim payments will have been cut from more than 50% of total revenue down to nothing.

● **Operation.** The watermelon movement out of Florida, depending on weather conditions, begins about the middle of April and lasts until some time in June. After that date, the Coast Line handles some melons out of south Georgia and shipments from South Carolina last through July, but the tonnage is negligible compared with the huge movement of winter melons from Florida. To handle the crop, the Coast Line has increased its loading ramp points in Florida to a total of 31. The melons are brought into such concentration points as Lakeland, Haines City and Sanford by fast local perishable trains along with citrus fruit. From those points they are rushed to Jacksonville, to make the fast long-distance perishable and TOFC trains going to Atlanta and thence via Louisville & Nashville to Cincinnati, Evansville and beyond, or via the Clinchfie'd through Spartanburg. Watermelons destined to North Atlantic coastal points are handled by the ACL via Richmond and Potomac Yards, on equally fast TOFC and perishable trains.

● **Special trailers.** At first, in 1964, melons moving via TOFC were handled in trailers not needed at the time for citrus, but, as the movement grew, specific trailers were assigned for watermelons during the shipping season. For the 1967 season, the Coast Line has 2,000 more trailers leased

(Continued on page 60)



There goes the old "Four Aces"

...here comes the new!

The famous Timken Company "Four Aces" finally went that-a-way. But before she did, she put in 30 years of mainline service—and showed the way for a whole new era in railroading.

She was America's first locomotive with roller bearings on all axles. A 4-8-4 and the biggest of her day. In her first 18 months, she rolled up an enviable record—over 100,000 trouble-free miles on 14 different lines!

She was built for the Timken Company to provide rolling proof to the railroads that Timken® tapered roller bearings could carry all combinations of their heavy radial and thrust loads. And could still keep rolling smoother, longer and with less maintenance than friction bearings.

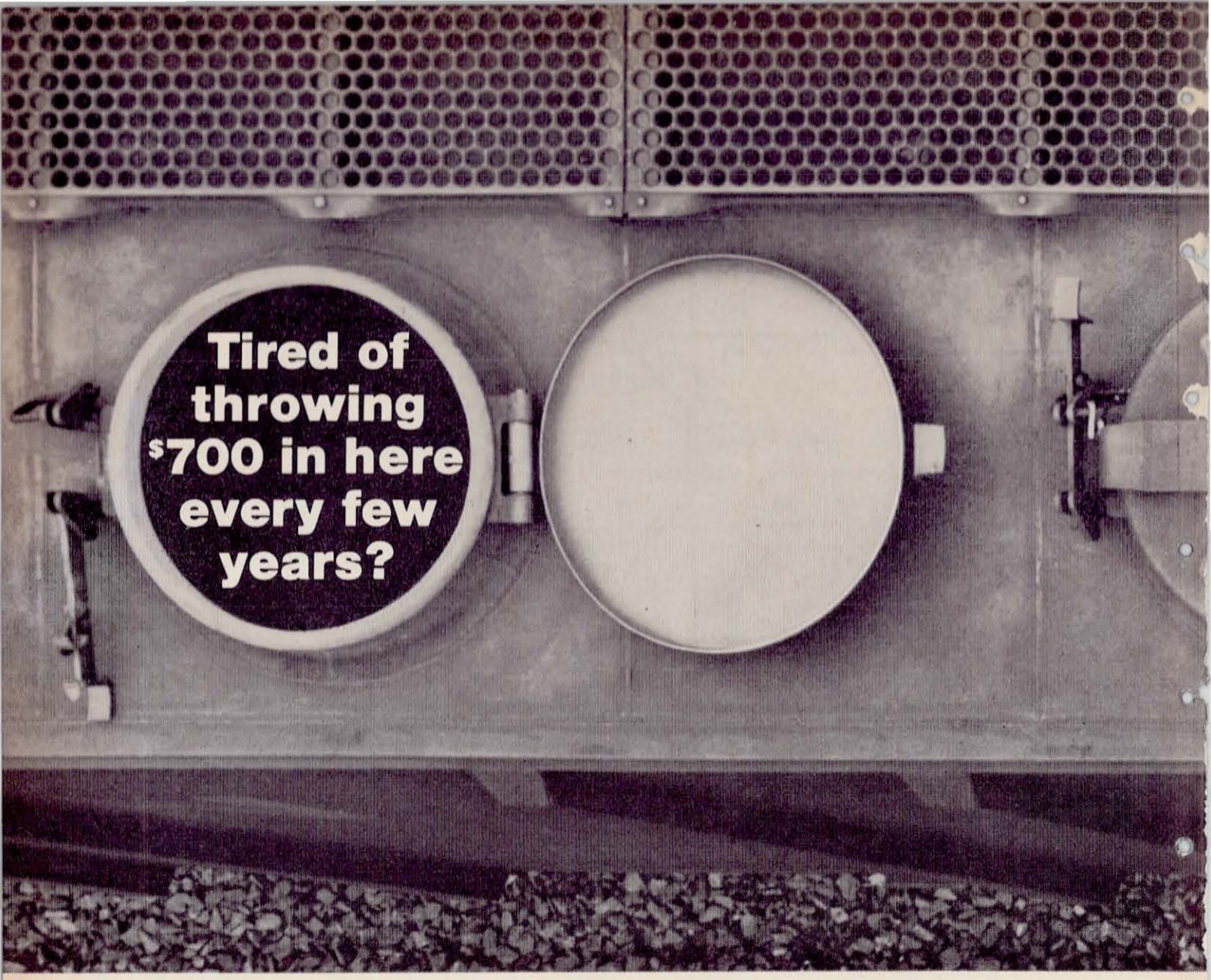
Today the "Four Aces" rolls again, on Timken tapered roller bearings. This time for Norfolk and Western. Diesel-powered, ultra-modern and built by Alco Products, Inc.—the same company that built her illustrious predecessor. This big Century-628 carries on in the "1111" tradition.

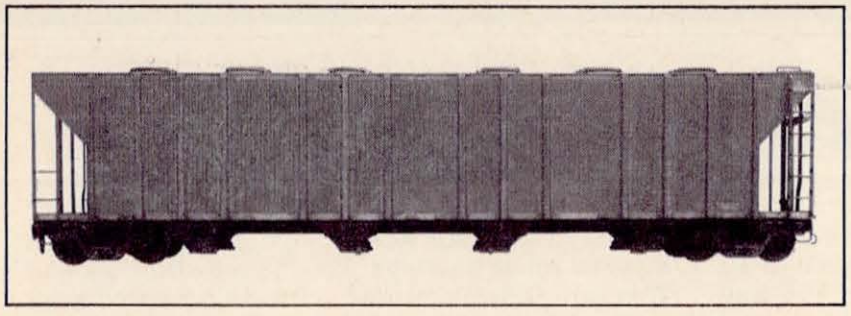
The trains she'll be heading as she highballs into the future will very likely roll on Timken "AP" bearings. Bearings that need less inspection and maintenance. And eliminate the railroader's ancient bug-a-boo—the hot-box problem.

TIMKEN®
TAPERED ROLLER BEARINGS

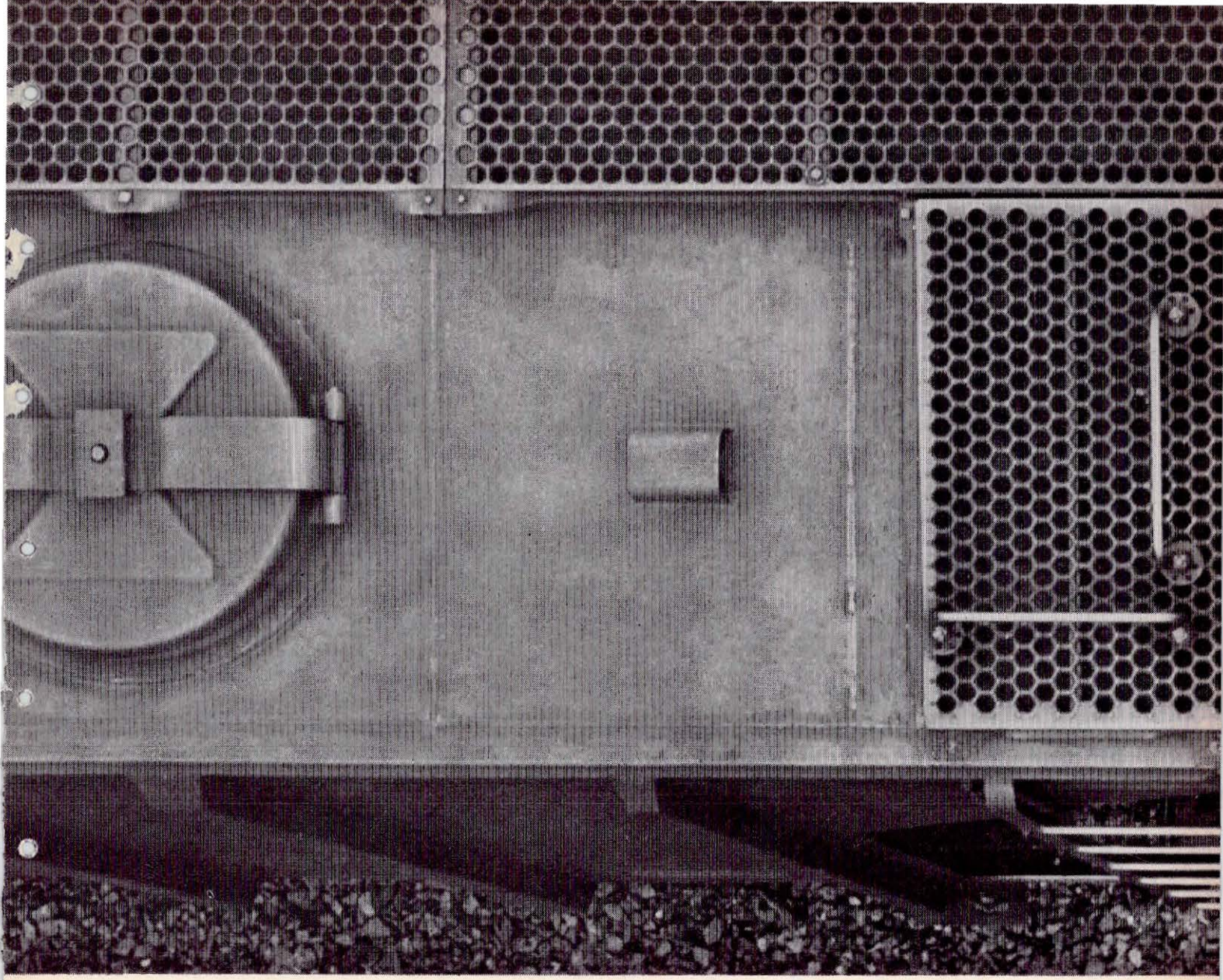
The Timken Roller Bearing Company, Canton, Ohio. Timken bearings sold in 116 countries, manufactured in Australia, Brazil, Canada, England, France, South Africa and the U.S.A.

Circle 21 on reader service coupon





Investigate aluminum-body covered hopper cars. They never need lining.



Why throw good money away, gritting your teeth every time a steel covered hopper car needs a plastic liner? It can happen two or three times over the car's service life—at $700 to $800 a crack.

A covered hopper car with a body of Reynolds Aluminum, on the other hand, needs no lining. It never rusts. Surfaces are smooth, gleaming, naturally resistant to corrosion. Just as it protects food products and other sensitive cargo from contamination, aluminum shrugs off the effects of the most corrosive ladings. This *no lining required* feature more than offsets the higher initial cost of an aluminum-body covered hopper, and generates big savings for you over each car's lifetime.

Aluminum surfaces are easily cleaned. Interiors may be swept down and hosed out quickly, easily —left to drain dry without fear of rusting. Not so with a steel hopper's interior. It must be re-lined or sandblasted to clean out built-up residue. (Just think about the cumulative effect of 3 or 4 sandblastings on slope sheets.)

Another factor: lost utilization, expenses incurred and revenues lost by down-time. It starts with the cost of moving steel hoppers to and from your shop. Then $700—$800 per car for relining. And, most vitally, missed payloads while cars are out of service. Those lost revenues can never be regained. (The cycle repeats itself for lining patch-up jobs . . . every two years on one major road.)

Aluminum's low-maintenance needs are far from your only plus-benefit. Lower deadweight is another. An aluminum-body covered hopper has substantially larger capacity than a steel car the same size. It can haul 7-8 tons more payload on every run.

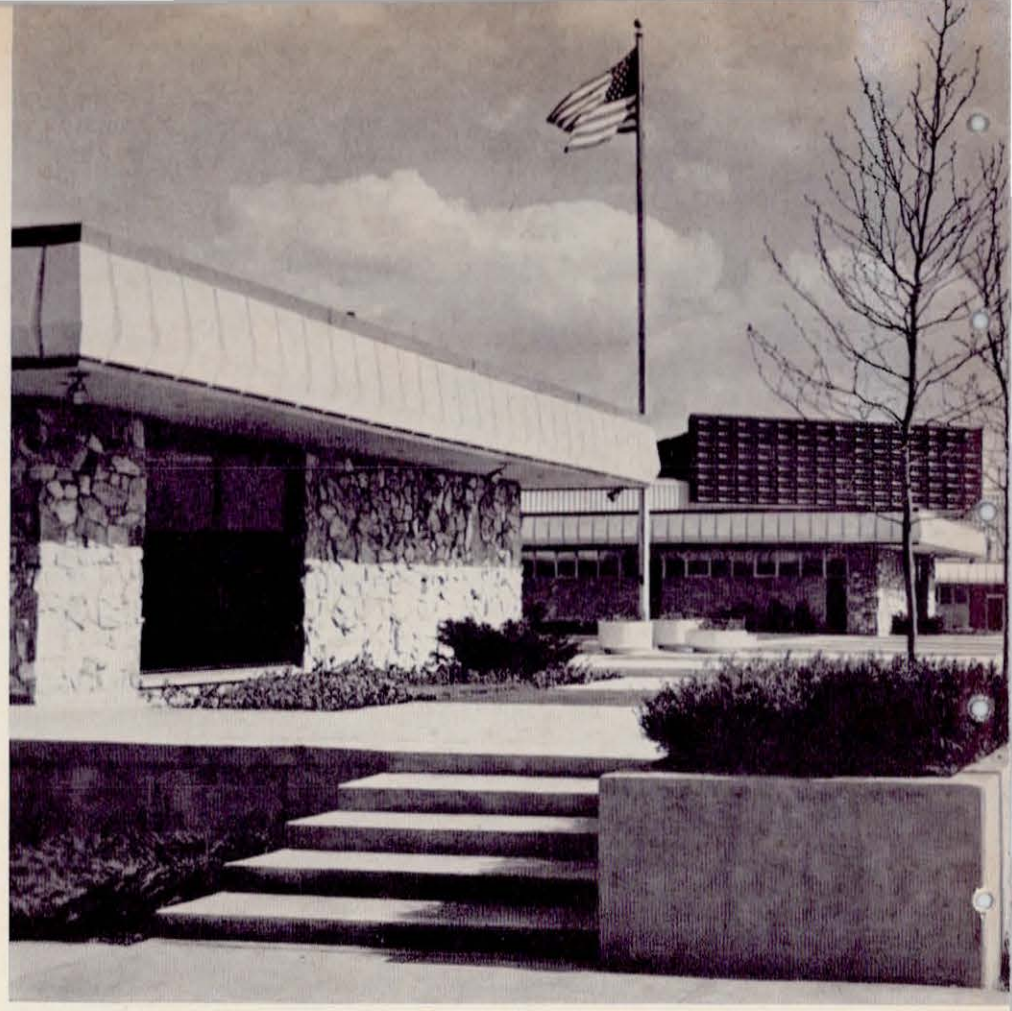
Covered hoppers of Reynolds Aluminum bring you higher rates for off-line service, too. What's more, their light weight cuts round-trip ton mileage, reducing your operating costs. Finally, each delivers over $2,000 more in eventual scrap-value than a comparable steel car.

It's hardly surprising, therefore, that more and more railroads and shippers specify aluminum bodies for their covered hoppers all the time. Learn the full story. The men at Reynolds are the leading supplier of aluminum and aluminum know-how for railroad applications. Contact your local Reynolds office or write *Reynolds Metals Company, P.O. Box 2346-TM, Richmond, Va. 23218.*

REYNOLDS
where new ideas take shape in
ALUMINUM

Watch **"Spotlight,"** Tuesdays, CBS-TV

Circle 22 on reader service coupon



PULLMAN-STANDARD'S CHAMP CARRY —the man for whom the technical center was named. The three-building complex, at Hammond, Ind., right, makes it possible for P-S for the first time to coordinate principal research and engineering efforts at a single location. Carry, now retired, is a former chairman and president of Pullman Inc. and was president of Pullman-Standard in 1948 when the company's first central railcar research lab was set up.

New P-S technical center geared

Pullman-Standard's Champ Carry Technical Center plans to use computers to assist in long-range planning and engineering of freight cars. R&D operations will have use of special facilities.

Anybody who still regards the business of freight-car building as a glorified job-shop operation hasn't been in touch with the major carbuilders lately. More importantly, he hasn't seen the multi-million-dollar Champ Carry Technical Center which Pullman-Standard opened with appropriate fanfare last week at Hammond, Ind.

P-S has had a centralized railcar research facility in operation for close to 20 years. But the new tech center far surpasses anything that's gone before, in both its scope of activity and its hardware.

● **Coordination stressed.** In the three-building complex, P-S will be able to coordinate research and engineering efforts at one location. And available to the researchers and engineers will be the Pullman Inc. computer center, an installation making use of third-generation computer technology.

About 175 people will be working at the tech center, in the carbuilder's research and development and freight-car engineering departments. They won't lack tools to do the jobs they're assigned.

The 75-man R&D operation headed by Dr. William P. Manos, for instance, will have available two new impact test ramps with full electronic instrumentation. They'll also have the advantage of such support facilities as an electronic-equipment repair laboratory, a chemical lab, a metallurgical lab and a machine shop and fabrication shop.

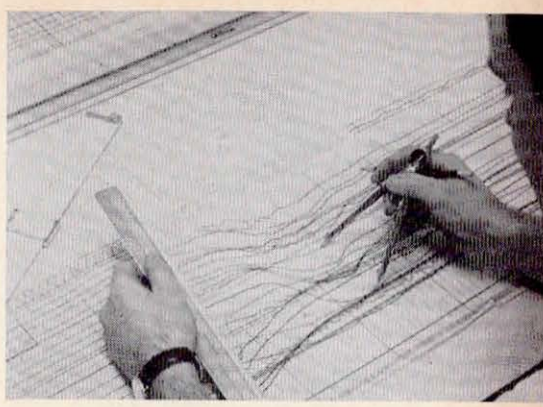
Under the P-S setup, the R&D staff —designers, mathematicians, chemical engineers, metallurgists, electronics engineers, machinists, draftsmen—is split into four divisions, for design, analysis, experimental and applied research. The R&D function: Development of new product lines, improvement of existing products, investigation of new developments in carbuilding materials and the testing of all P-S products before they hit the market.

Working closely with R&D at Hammond will be the freight-car engineering department, headed by George Rousseau and previously based at the P-S plant at Michigan City, Ind. About 100 of the department's 150 people will be headquartered at the tech center, with the others assigned to the P-S carbuilding plant facilities.

● **More than engineering.** Through its five divisions—material estimating, stress analysis, value engineering, data retrieval and central engineering—the department gets into far more than just engineering. Before the specs and production drawings come off the boards, engineering people are active participants in the over-all planning stages, working with the marketing department to develop car requirements, making cost estimates to be used in sales proposals and negotiating with the customer on mechanical details of construction.

One major element that sets the

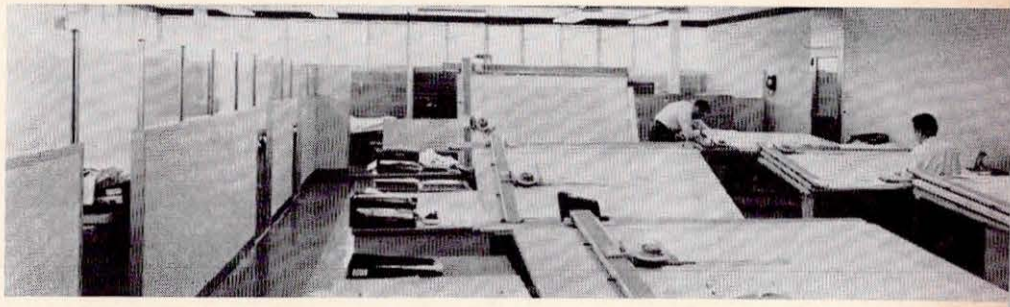
IMPACT TESTS: Peak and wall force of cushioned car is tested on Center ramp.



WHAT TESTS MEAN: Technicians study data taken from recording oscillograph.

Research means better railroading

'SPACE-GRID' SYSTEM was applied in building Center's interiors.



for sophisticated car research

tech-center operation apart from previous P-S operations is the data-handling capacity in the Pullman Inc. computer center.

Right now, the freight-car engineering department is in the process of retrieving design data on every production line of cars going through the four carbuilding plants. By the end of the year, bills of material will be computerized. And, as P-S puts it, "Projected into long-range planning are many ways in which the computer will give freight-car engineering assists in the processing of scientific engineering applications."

Also scheduled for fourth-quarter 1967 installation is implementation of a computerized on-line data transmission network linking the tech center with carbuilding plants at Butler, Pa., and Bessemer, Ala. This equipment, P-S says, "will transmit vital information for management a few hours after its availability to the technical center for computer processing and will complete the link for all manufacturing facilities."

● **Data retrieval set up.** In addition, a newly-developed engineering information retrieval system "is enabling P-S to retrieve the several hundred engineering drawings or their nearest design for every order. This computer system provides for the rapid and minimal engineering for every order in a complex job-shop operation. Now being implemented is a manufacturing subsystem which will immediately pinpoint potential expenditures in the area of fixtures and dies for all new business. Under development to supplement this system is a phase to provide customer price quotations for all inquiries."

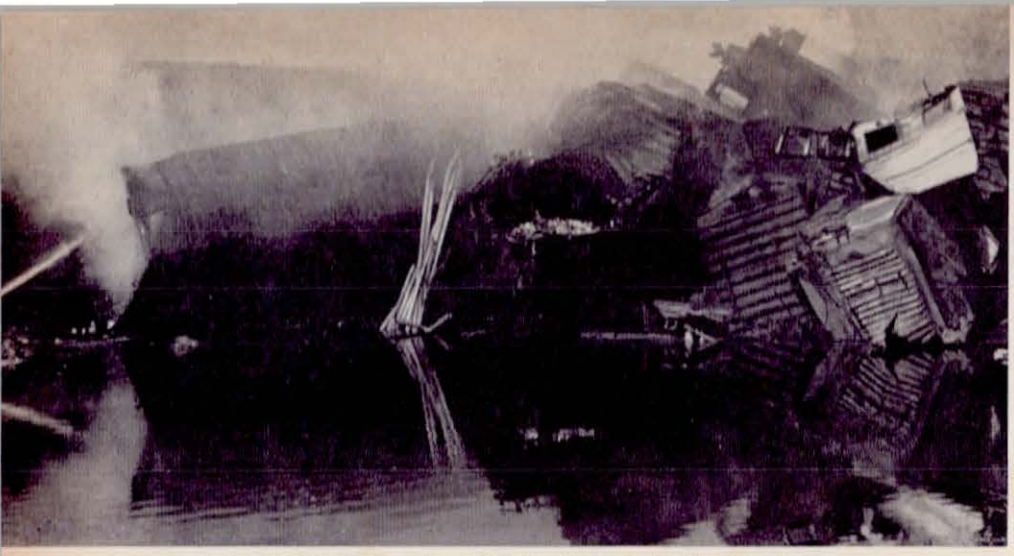
Programming has also been worked out for the integration of computer processing with physical test facilities for data reduction. And there is routine processing of orders for stress analysis.

In the few months since the data-systems part of the center began functioning, the foundation has been laid for what P-S describes as a "highly sophisticated manufacturing control and management information system. Ultimately, it is expected that the company will have in operation a unified computer system involving estimating, purchasing, costs, tooling and manufacturing controls and production scheduling—all built on the foundation of engineering data retrieval."

● **Carry's day.** For the official opening of the center June 20, P-S pulled out all the stops. Dedication day attracted more than 400 persons—railroad officers from throughout the country, government officials, representatives of business and industry generally.

Pullman-Standard used the occasion to stage an impressive display of new freight-car and rapid-transit equipment, as well as products turned out by Pullman's other divisions.

On hand for the ceremonies were W. Irving Osborne, Jr., chairman and president of Pullman Inc.; J. W. Scallan, president of P-S and Trailmobile divisions; and George L. Green, vice president and general manager of P-S. But the day really belonged to the man for whom the center was named —Champ Carry, now retired, who was president of Pullman-Standard back in 1948, at the time the division's first central railcar research laboratory was set up at Hammond. ■



NOT A PLEASANT PICTURE FROM ANY ANGLE

Derailment is a word the railroad lexicon could do without—but it's a word that will be mentioned frequently at the 1967 meeting of the American Association of Railroad Superintendents in Chicago this week.

AARS report zeroes in on derailments

The cause, clearing and cure of rail accidents gets a going over in a committee report set for Superintendents' meeting.

Nobody can accuse today's operating officers of ducking the dirty work in discussing their problems. This week in Chicago, members of the American Association of Railroad Superintendents will lead off their annual meeting with a report on what an AARS committee refers to as "probably the most disagreeable subject it's possible to present to an assembly of superintendents." The subject: Derailments, and their cause, clearing and cure.

Sharing top billing with this fact-packed report will be reports on four other operating problems, an address by Western Maryland President W. Arthur Grotz—and one of the first addresses to an industry group by the new president of the AAR, Thomas M. Goodfellow. Goodfellow, president of the Long Island until he went to Washington June 1, will deliver the traditional "charge" to the operating officers at the opening session of the three-day meeting, June 27.

Then will come that report on derailments, prepared by Southern Superintendent L.H. Smith, Jr., and a committee of 19 other AARS members.

• **On the ground—but why?** Smith's group is particularly hard-hitting on the topic of cause. As the report notes, "the most helpless feeling in the life of a superintendent is the one that comes when he experiences a derailment for which there is no established cause. While there's no useful by-product of a derailment, it's of absolute necessity that a cause be determined in each instance. Once determined, the cause must be probed, discussed and literally torn apart in the interest of derailment prevention."

The first commandment laid down by the committee is that the officer responsible for establishing cause get to the scene, and quickly: "Practically every derailment leaves its tell-tale story at the scene. To a practiced eye, it can be read as simply and as readily as you would read a book. This is true in probably 90% of the derailments that occur. . . . But this evidence is often obliterated by hasty attempts to clear up the derailment."

The derailment committee also shows awareness of a certain problem in communications between the crew experiencing a derailment and the supervisor to whom it's reported: "Initial decisions on clearing derailments are generally based on a bare gleaning of information from the scene. For example, some crews will report a derailment and advise that the derrick should be started immediately—and while this conversation is taking place, the brakeman has either rerailed the car or rolled or skidded it into the clear. On the other hand, some old-head conductor will come on the phone and, after inquiring as to your health, suggest that he is in a little difficulty. As you pull it out of him car by car, he finally allows as how he might need the derrick to help clear up a 45-car mishap. For this reason, too, it is imperative that a trained eye be dispatched to the scene by the quickest means."

• **Move—but not too fast.** On the matter of clearing derailments and getting the line back in service, the committee again urges careful consideration by supervision on the scene. The hasty, bulldozer approach to clearing may be the best way of getting a line back in service quickly—but, as Smith's group warns, it can also be highly destructive of lading, and it can result in further damage to high-priced, specialized equipment.

Among the examples cited:

—In cleaning up a derailment involving several TOFC loads, crews came upon two rolls of material resembling heavy backing or matting for carpets. The crews ignored the rolls and, in fact, ran over them with bulldozer equipment. But the rolls weren't rug-backing. They were asbestos rolls used in making paper, and they were valued at $75,000. The claim estimate was $40,000-plus—and "if this figure were accurate, it exceeded the total cost of the rest of the damage."

—Another road experienced a derailment of 33 cars of a phosphate unit train. In this instance, claims people were on the scene quickly, and they persuaded operating officers to salvage the lading before clearing the wreck. This required detouring over a neighboring line for three days while a shoo-fly through a swamp was being built. The shoo-fly itself then remained in service for three weeks. All this cost money. But by spending $25,000 on salvage operations, the road recovered cargo valued at $162,500. As the committee puts it, "had wrecking operations proceeded normally, no doubt the loss to lading would have been in excess of $250,000."

—On still another road, 42 cars of an aluminum-ore unit train were derailed on a branch line. A shoo-fly was built, lading in each car was transferred and finally each car was rerailed with use of two derricks. The derailment "created operating problems for a three-week period over this segment of railroad. But, the method employed in handling the equipment paid dividends in greatly reduced equipment-

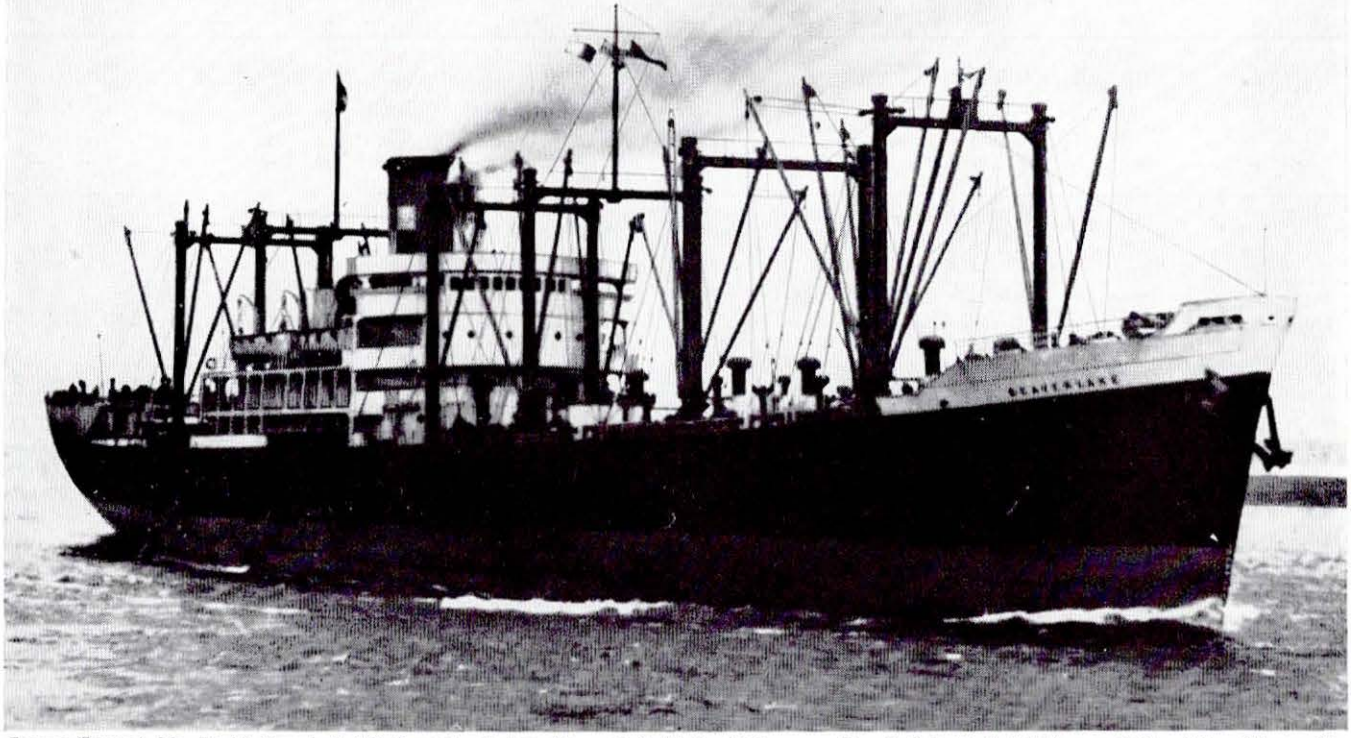
(*Continued on page 76*)

What's a railway doing with a fleet of cargo ships?

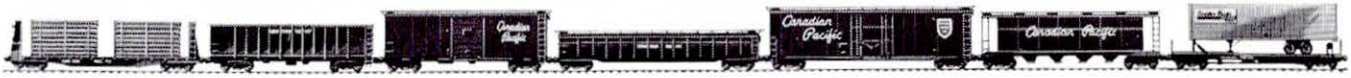
We're providing our customers with faster, more efficient freight service to, from and through Canada and overseas. But that's not all. Canadian Pacific's unique freight service combines trains, cargo jets, trucks and ships into one integrated freight system with automated control by jet-age telecommunications. This one-carrier, door-to-door service assures you of careful, speedy handling. Could mean less paperwork, less trouble, less worry and higher profits. Do you have a shipping problem? Let us custom-fit a solution for you with our unique service. Call one of Canadian Pacific's freight traffic specialists. Your competition will.

Canadian Pacific

Trains/Trucks/Ships/Planes
Hotels/Telecommunications
WORLD'S MOST COMPLETE TRANSPORTATION SYSTEM



Bangor (Brewer), Me., W. M. Campbell, P.O. Box 163 • **Boston, Mass.,** P. G. Watts, 150 Causeway St. • **Buffalo, N. Y.,** P. Coleman, 17 Court St. • **Chicago, Ill.,** W. L. Epperson, 2040 Bd. of Trade Bldg.; R. A. Hasenstab, 2040 Bd. of Trade Bldg.; A. R. Miller*, 2040 Bd. of Trade Bldg.; C. A. MacKenzie, 2040 Bd. of Trade Bldg. • **Cincinnati, Ohio,** F. A. Dykstra, 49 East Fourth St. • **Cleveland, Ohio,** D. R. Habetler, 614 Superior Ave. • **Dallas, Texas,** A. E. Gorman, 1509 Main St. • **Detroit, Mich.,** W. W. Schader, 660 Woodward Ave.; L. J. Nieckarz, 660 Woodward Ave.; R. L. Purdy, 2243 First Nat'l Bldg. • **Hartford, Conn.,** J. A. Sullivan, 410 Asylum St. • **Houston, Texas,** J. F. Malone, P.O. Box 36051 • **Indianapolis, Ind.,** L. F. McMahon, 115 N. Pennsylvania St. • **Kansas City, Mo.,** R. J. Schmitt, 6 East 11th St. • **Los Angeles, Calif.,** J. H. Aylwin, 459 Pacific Electric Bldg. • **Memphis, Tenn.,** P. O. Tobiasson, P.O. Box 17241 • **Milwaukee, Wis.,** C. Johnson, 1312 Majestic Bldg. • **Minneapolis, Minn.,** O. C. Ulmer, 1412 Soo Line Bldg. • **Mobile, Ala.,** D. R. Clark, 211 I.B.M. Bldg. • **New York, N.Y.,** W. G. Wiley, 581 Fifth Ave.; J. P. Yafcak*, 581 Fifth Ave.; A. A. Hertle, 581 Fifth Ave. • **Omaha, Neb.,** J. J. O'Keefe, 1319 Farnam St. • **Philadelphia, Pa.,** C. C. Seiss, 1819 John F. Kennedy Blvd. • **Pittsburgh, Pa.,** A. Nemenz, 436 Seventh Ave. • **Portland, Me.,** T. P. Maloney, 232 Saint John St. • **Portland, Ore.,** G. W. Roscoe, 621 S. W. Morrison St. • **Presque Isle, Me.,** D. W. Spicer, 324 Main St. • **St. Louis, Mo.,** J. C. Waddell, 611 Olive St. • **San Francisco, Calif.,** M. G. Anderson, 681 Market St. • **Seattle, Wash.,** A. G. Bower, 1323 Fifth Ave. • **Spokane, Wash.,** W. D. Reeves, 730-731 Old Nat'l Bank Bldg. • **Tampa (Temple Terrace), Fla.,** J. R. Wyman, P.O. Box 16277 *Specialists in overseas freight



Circle 12 on reader service coupon

Look, Ma! No center sill!

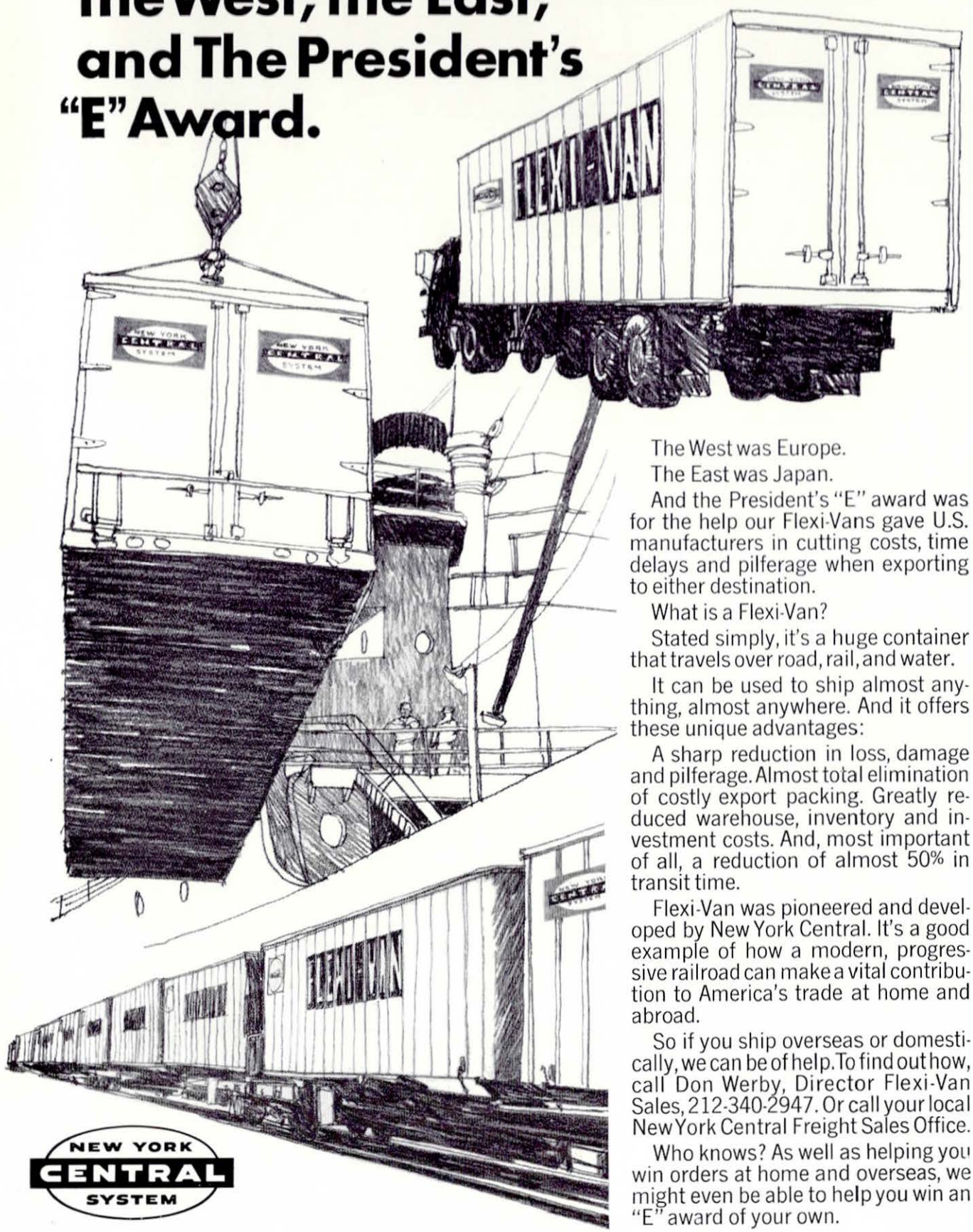
There's not much Pullman-Standard engineers can't do if you put their minds to it. Eliminating the center sill—with no loss of structural strength—speeds the unloading of many dry bulk commodities. It's just one of many available P-S Covered Hopper features that can speed up your profits all down the line. Don't say it can't be done. Not 'til you call Pullman-Standard.

Pullman-Standard
WORLD'S LARGEST RAIL CAR MAKER

RPI
RAILWAY PROGRESS INSTITUTE

PS
A Division of Pullman Incorporated
200 South Michigan Avenue, Chicago, Illinois 60604

The container that won the West, the East, and The President's "E" Award.



The West was Europe.

The East was Japan.

And the President's "E" award was for the help our Flexi-Vans gave U.S. manufacturers in cutting costs, time delays and pilferage when exporting to either destination.

What is a Flexi-Van?

Stated simply, it's a huge container that travels over road, rail, and water.

It can be used to ship almost anything, almost anywhere. And it offers these unique advantages:

A sharp reduction in loss, damage and pilferage. Almost total elimination of costly export packing. Greatly reduced warehouse, inventory and investment costs. And, most important of all, a reduction of almost 50% in transit time.

Flexi-Van was pioneered and developed by New York Central. It's a good example of how a modern, progressive railroad can make a vital contribution to America's trade at home and abroad.

So if you ship overseas or domestically, we can be of help. To find out how, call Don Werby, Director Flexi-Van Sales, 212-340-2947. Or call your local New York Central Freight Sales Office.

Who knows? As well as helping you win orders at home and overseas, we might even be able to help you win an "E" award of your own.

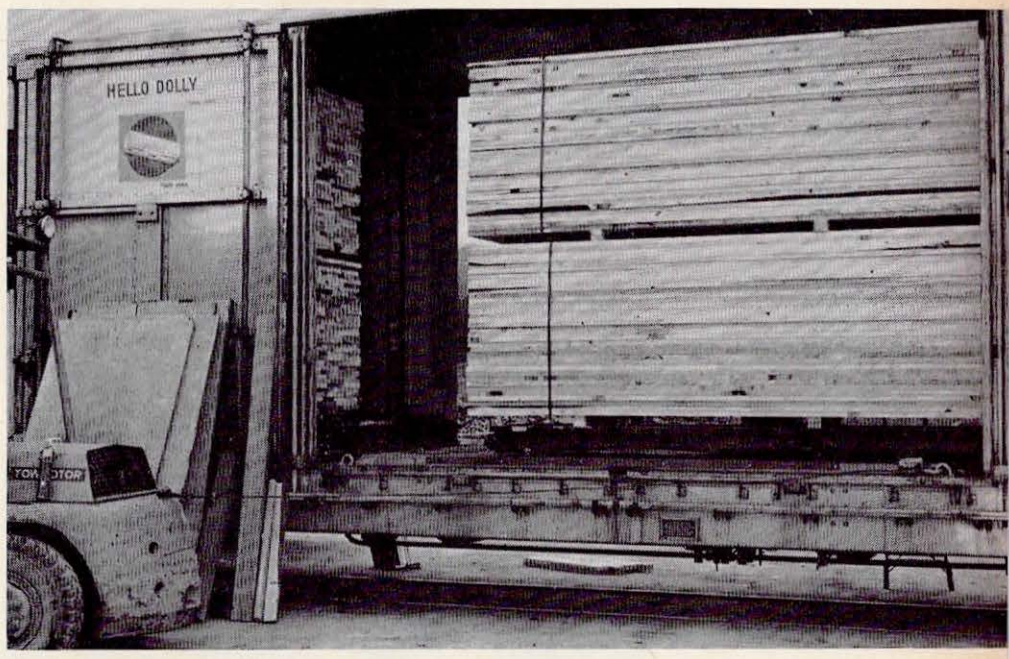
NEW YORK CENTRAL SYSTEM

Circle 33 on reader service coupon

"Hello Dolly" car tries out on road

New loading concept is claimed to make conventional box car equal to all-door type.

SIDE FILLERS which are operated by hand crank at doorway steady the load after dollies have been loaded and returned to shipping position.



LOADED DOLLY is moved from doorway to its position at car end by cable that runs through pulley to the lift truck which has just handled the pallets.

If Transport Leasing's new "Hello Dolly" box car is as successful as the long run "Hello, Dolly" musical comedy, the company has a winner.

Announced as a major advance in cargo handling, the car makes it possible to handle unitized lumber and plywood by placing the loads on built-in dollies. The dollies can be moved from the ends of the car to the doorway area for loading, then rolled back to the end and locked in place. This arrangement eliminates the difficulty of moving the loads on separate rollers to the ends of the car, and removing the rollers when the loads are in place. It also enables the receiver to get the load into the doorway for unloading with a minimum of effort.

In addition to lumber and plywood, other commodities which can be shipped in the car include canned goods, pipe, rolled floor coverings and other long, unitized packages.

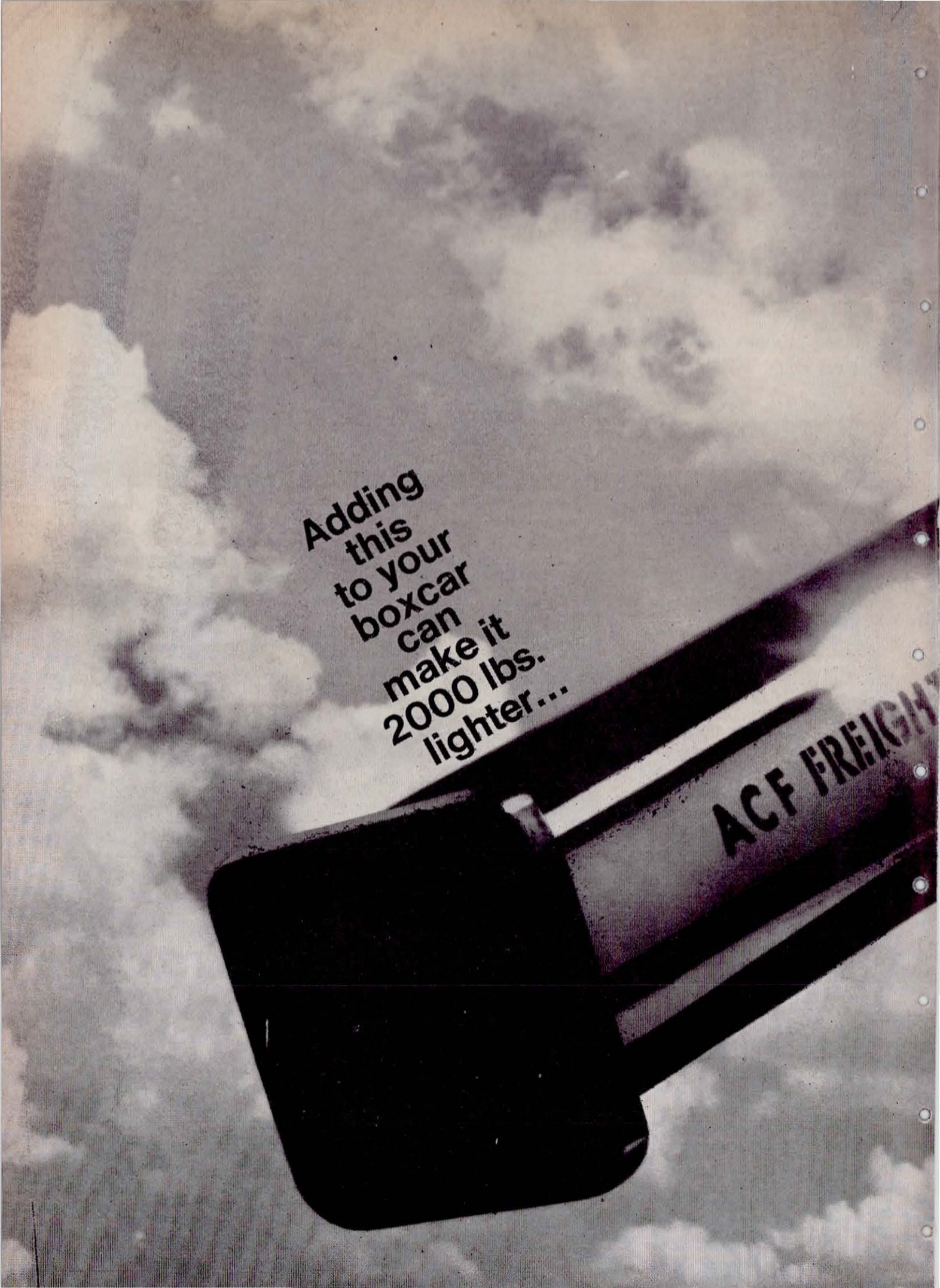
● **Fast, safe, economical.** The car, an exclusive by Transport Leasing, a division of Pullman Inc., has been tested in carload shipments by the McCloud River Railway. Flake Willis, the road's president, reports, "Our experience with the car has shown that loading and unloading is faster, safer, and more economical. With the use of side fillers and dunnage bags as needed, the shipments have arrived at destination in excellent condition."

For its first "Hello Dolly" car Transport Leasing has utilized a standard 60½-foot box car equipped with Hydroframe-60 cushion underframe and double 9-foot plug doors to provide an 18-foot clear door opening.

The inside of the car is equipped with two pairs of modified I-beam tracks extending the length of the car, one on each side of the longitudinal centerline. Mounted on each track are two 16-foot-long by 4-foot-wide movable dollies. Each can be moved from the end of car into the doorway and back to the end of the car. The dollies have four pairs of wheels; the front and back are flanged, the others flangeless.

● **Automatic locking.** The dollies are permanently attached to the tracks and cannot be removed from the car. They automatically lock in position when pushed toward the end of the car, and also when pulled into the doorway. This eliminates the possibility of a dolly being left unlocked and damaging the load or car structure when the car is impacted.

The loading procedure is to pull one platform into the doorway area, load it and push it back to the end of the car. When the four platforms are loaded and pushed to the ends of the car, the doorway area can be loaded in a normal manner. To unload, the procedure is reversed—with the doorway areas unloaded first, and then the platforms are pulled, one at a time, into the doorway area for unloading. ■


Adding
this
to your
boxcar
can
make it
2000 lbs.
lighter...
ACF FREIGHT

...than cars with other cushioning systems. With ACF Freight-Saver™ units, you get an increase in payload and revenue from your boxcars *without* paying a premium for special lightweight materials.

The reason's simple. ACF Freight-Saver cushioning design eliminates heavy springs and a lot of other deadweight. Compressed dry nitrogen is used for return, which makes recentering much more dependable. Freight-Savers soak up shocks impact after impact, to protect damage-sensitive ladings.

Maintenance? It couldn't be easier. If friction develops between fixed and sliding sills, adjust the pressure. There are few moving parts, and special alloy steels provide enormous strength. Freight-Saver cushioning is built, backed and serviced by ACF engineering and know-how. Over 8,000 units are now in use on 30 railroads.

Increase your payload and protect it, too, with up-to-date Freight-Saver cushioning. For details contact American Car & Foundry Division, ACF Industries, Incorporated, St. Charles, Missouri 63301.

acf ACF INDUSTRIES

WATCHING **WASHINGTON** WITH WALTER TAFT

TAFT

NEW AAR HEAD HIGH ON D.O.T.—The AAR's new president, Thomas M. Goodfellow, thinks the new cabinet-level Department of Transportation could be a very good thing for the railroads. The new Department is headed by Alan Boyd as Secretary of Transportation. Goodfellow is enthusiastic about what it may do for the transportation industry. He expressed this view at a recent get-acquainted luncheon meeting with Washington correspondents who cover the transport field. He declined to be specific, because he didn't think his 14 days on the job had made him knowledgeable enough to understand and appraise the D.O.T. aspirations. He did say, however, that "the sky is the limit on what it could do."

Goodfellow came to the AAR June 1, from the Long Island where he had been president since 1956. He succeeded Daniel P. Loomis, who resigned for health reasons, but will remain as consultant until his retirement at the end of this year.

GOOD FREIGHT OUTLOOK—As to the railroad outlook, Goodfellow thinks the freight service has a bright future. For this optimistic prediction he relies on what he calls the definite turn in the general railroad attitude about doing what it takes to meet the competition, and on his expectation that this thinking will bring more traffic-getting service and rate changes.

While he warns that the air transport industry's bid for more cargo business is a cause for concern, Goodfellow thinks truck volume must be near its peak. Here he has in mind the development of highway congestion which tends to slow truck movements at a time when railroads are able and willing to offer faster service. He anticipates that current studies looking to the development of higher passenger-train speeds will advance freight-service technology, too. So, he suggests that the not-too-distant future may be a time when freight-rain speeds of 75 mph are not unusual.

CAUTIOUS ABOUT PASSENGER BUSINESS — Goodfellow's comment on the outlook for railroad passenger service was more cautious. He foresees that it may be confined pretty much to high-speed service in corridors like that between Washington and Boston, where the D.O.T. demonstrations are under way, and to vacation travel. He does not agree with those suggesting that railroads might do much more to promote passenger business. He says many roads have done excellent jobs in that area.

TRACKS ARE READY—The new AAR president thinks the basic track structure is generally ready for the higher speeds being talked about. He doesn't mean that some tracks won't require revamping. But he doesn't expect that anyone in this country is going to put up the money to build an entirely new railroad like Japan's 320-mile New Tokaido Line between Tokyo and Osaka.

Incidentally, some American entreprenurs did propose to do something like that back in the Twenties. Led by the late L. F. Loree, who was president of the Delaware & Hudson, they organized the New York, Pittsburgh & Chicago to build a 283-mile freight line in Pennsylvania from Allegheny City, near Pittsburgh, to Easton. Their pleadings for an ICC certificate promised that the proposed line would be unequaled for operating efficiency anywhere in the world—it would be "a super-railroad, built and equipped according to the highest state of the art of railroad construction and with locomotives and other equipment of the most modern type." The application for a certificate, opposed by several eastern roads, was before the ICC from 1925 until the depression year of 1932. It was then denied, principally because the Commission was unable to find that prospective Eastern-territory traffic could support such a line and still leave enough business for the existing roads.

FOR FAST READING SERVICE OR COMPLETE INFORMATION ON OUR FACILITIES CONTACT:

ATLANTA, GA. 30303
W.L. Long, Jr. Regional Sales Manager
930 Healey Building

BOSTON, MASS. 02110
W.F. Dervan, Regional Sales Manager
1510 United Shoe Building

BUFFALO, N.Y. 14203
M.F. Hickey, Regional Sales Manager
925 Ellicott Square Building

CHICAGO, ILL. 60604
W.A. Gehl, Regional Sales Manager
T.J. Palka, Western Reg. Sales Manager
T.O.F.C. Service
Room 673—208 South LaSalle Street

CINCINNATI, OHIO 45202
D.D. Sylvester, Regional Sales Manager
1231 Carew Tower

CLEVELAND, OHIO 44114
J.W. Poland, Regional Sales Manager
512 Park Building

DETROIT, MICH. 48226
W.R. Herman, Regional Sales Manager
1234 Lafayette Building

NEW YORK, N.Y. 10007
724 Woolworth Building
T.J. White, Regional Sales Manager
T.F. McLaughlin,
Regional Sales Manager—Coal Traffic
J.A. Creighton,
New York Regional Sales Manager
T.O.F.C. Service, Port Reading, N.J.

PHILADELPHIA, PA. 19107
Reading Terminal
R.H. Weinsheimer, Regional Sales Manager
P.R. Fagan, Director of Sales—Foreign Traffic
A.W. Nemenz, Director—Coal Traffic
W.C. Noble, Dir. of T.O.F.C. &
Motor Carrier Sales

PITTSBURGH, PA. 15219
B.W. Dixon, Regional Sales Manager
2812 Koppers Building

PORTLAND, OREGON 97204
C.E. Dingler, Regional Sales Manager
301 Corbett Building

READING, PA. 19601
J.P. Gavaghan, Regional Sales Manager
Outer Station
North Sixth Street

ST. LOUIS, MO. 63101
F.X. Gallagher, Regional Sales Manager
2088 Railway Exchange Building

SAN FRANCISCO, CALIF. 94105
J.R. Rose, General Manager
Sales—Western Region
473 Monadnock Building

WILMINGTON, DEL. 19805
D.M. Sproat, Regional Sales Manager
220 Beech Street

Reading Lines

...we can divert your shipment to its new destination.

How? With TRACE, our new computer system. Into it go all the data on *every* shipment on Reading rails and every Reading movement. The moment your shipment reaches our lines, its progress toward destination is fed in continually, step by step. At the first junction it reaches, your shipment can be diverted to the new destination you have chosen.

Every one of our sales offices is now electronically linked into TRACE. A fast phone call to any one of them gives you your answer in little more than the time it takes to ask!

The new communication network is also a mighty handy way to tell you if a special type of car is available for a special shipment. Where it is located. And how fast we can get it to you.

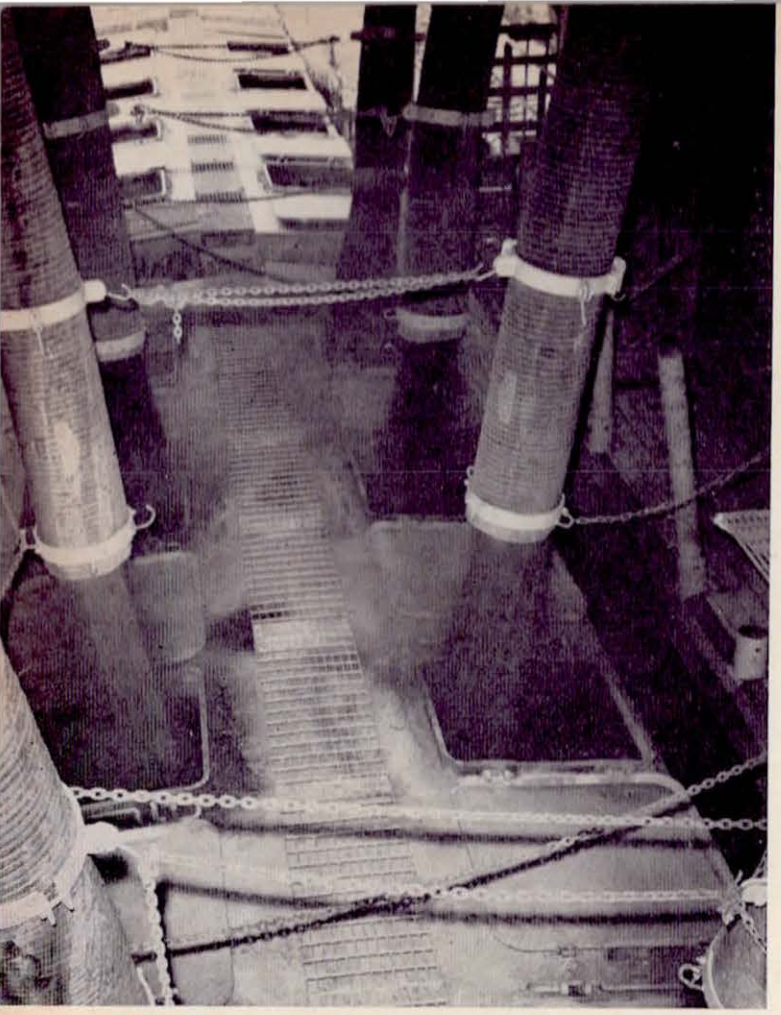
Try Reading. Discover how efficiently and punctually distribution problems can be solved by a really progressive railroad concentrating on "Personalized Customer Service." Phone your nearest sales office.

Reading lines

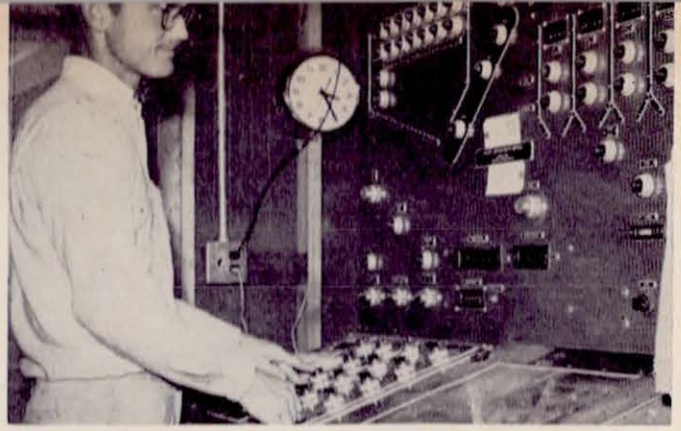
READING RAILROAD

On-time-delivery is our #1 concern

Circle 26 on reader service coupon



DRY ROCK is weighed in advance and properly distributed to fill all of a car's compartments simultaneously as it stops.



CONTROL CONSOLE is heart of system from which the filling of long strings of cars is performed by single operator.

CAR PULLER positions each car under loading tower to receive the load which has already been accumulated overhead.

Pre-weighing speeds loading

Florida phosphate plant installs facility for automatically accumulating in advance a load that will fill exactly the next covered hopper car which is to move under its loading chutes.

A bulk-materials loading system which a shipper likes because it cuts costs—and which two railroads like because it eliminates overloaded cars—is now operating at Kingsford, Fla. The facility producing all this satisfaction is at the new dry rock plant of International Minerals & Chemicals Corp. near Mulberry, Fla.

Phosphate from this operation moves over the Atlantic Coast Line and the Seaboard, primarily for ocean shipment from IM&C's Port Sutton docks at Tampa. Vital to the new loading process are electronic load cells which make possible rapid accumlation of carsize batches tailored in advance for the specific covered hopper car which will next move under the chutes.

● **System savings.** Payoff from the new system comes to IM&C in a number of ways:

—Loading of cars of varying capacities can proceed continuously and with no uncoupling or switching:

—A yard locomotive is no longer an adjunct to the loading operation;

—Manpower requirements are reduced;

—Potential for automatic billing has been established.

Previously dry rock loading required at least three men—one to load cars, one to uncouple them for switching to a track scale, and one to trim those which were overloaded. A yard locomotive moved the cuts of cars through the loading site.

"Compared with what we have now, that was a tedious, time consuming and costly operation," observes L. Lopez, assistant superintendent of preparation at Kingsford. "The new system is completely operable by a single man. Actually he has a few more functions to perform, and he's got to supply the correct input information to the control console. But that is mostly a procedural function and, once learned, requires only reasonable alertness and judgment."

● **Programmed loading.** Programming of exact loads into cars, considered previously, was impeded by certification difficulties. The Southern Weighing and Inspection Bureau told IM&C that it would accept an off-track system if each load could be weighed individually to proper tolerances before going into the car. ACL and SAL do now accept the weights for billing purposes.

In conventional dry-rock loading systems, storage silos are located directly over the tracks. Phosphate is dumped directly from the silos into

covered hopper cars by experienced operators who adjust the amount and location of the load in each by sight. Cars are weighed individually and, if overloaded, must be partially unloaded and reweighed. The wide variety of current car sizes and capacities makes it easy for operators to misjudge loads.

● **Load cell weighing.** The new weighing concept, originated with IMC engineers, was developed in collaboration with Revere Corporation of America. The electronic weighing system includes the load cells, the remote control panel and automatic recorders. A conveyor carries the dry rock from the trackside silos to the top of an overtrack loading tower where, through a series of gates, the material is fed into a compartmented weighing hopper. The hopper, supported in the tower on four load cells, is stabilized by a system of anti-vibration bars. The material flows from the weighing hopper bins into flexible chutes for delivery to covered hopper cars beneath. To compensate for various car heights, the chutes are adjustable. The entire system is electronically controlled through a master console in a tower above the cars.

● **Moved by puller.** A car puller, operated from the console, positions each car in a 20-car cut under the tower. After determining the capacity of a car's multiple compartments, the operator sets the correct weight of material for each bin of the weighing hopper which subsequently will be unloaded into a corresponding car compartment. He also sets on the console the car reporting marks and number, light weight, silo number, date and other data.

When the system is activated, the conveyor moves material from the correct silo into the first bin of the weighing hopper, continuing to do so until the electronic load cells signal that the predetermined weight has been delivered. The gates then divert the flow into the hopper's second bin. This process continues until all bins have been loaded. When the conveyor automatically stops, the total weight is then added automatically by the electric typewriter to preset data.

● **Six-minute cycle.** When the operator presses the unload button, gates at the bottoms of all bins open simultaneously. The operation from silo to hopper car takes less than six minutes. When all the material has been dropped, the gates close automatically.

The billing form, now complete, is ready for the shipping foreman's office. Although the automatic billing feature is not now integrated with computerized data processing, it has been designed with that capability. ■

PAK-MOR'S car cleaning units are PLANNED PROGRESS!

A PAK-MOR CAR CLEANING UNIT

PAK-MOR CAR CLEANING UNITS are built by a manufacturer with railroad know-how and with the greatest fund of experience, knowledge and technique in designing and building.

PAK-MOR MANUFACTURING COMPANY are specialists in railroad car cleaning equipment. They are revolutionizing the car cleaning program all across America.

It is the newest concept in up-grading freight cars at the lowest possible cost and greatly reduce the loss and damage claims.

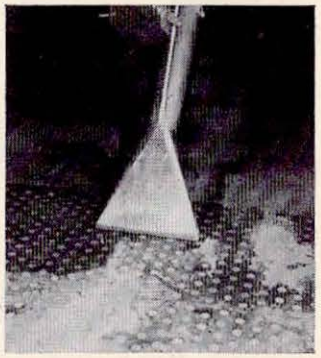
PAK-MORs have proven so successful that they are now in use by many of the Class I railroads. Every month more railroads see the importance of PAK-MOR equipment and place orders.

PAK-MOR CAR CLEANING UNITS may be equipped with the most satisfactory mobile vacuum on the market. This vacuum has been perfected by PAK-MOR and a large manufacturer of vacuum equipment. We have records that a large eastern railroad vacuums cars in 3 to 5 man minutes, with a PAK-MOR CAR CLEANING UNIT.

We would like to have an opportunity to work with you in your car cleaning program. We have facts to show that we can reduce your car cleaning cost.

To Any Railroad, a PAK-MOR Can Mean GREATER PROFITS, LOWER OPERATING COSTS and CARS BACK IN SERVICE FASTER

(When There is No Time for Down Time, Use a PAK-MOR All the Time)



Dust Vacuum Available
(Also for trailer mounting)

Write for more details or for a factory engineer to call.

SANITATION FOR THE NATION
PAK-MOR
MANUFACTURING COMPANY

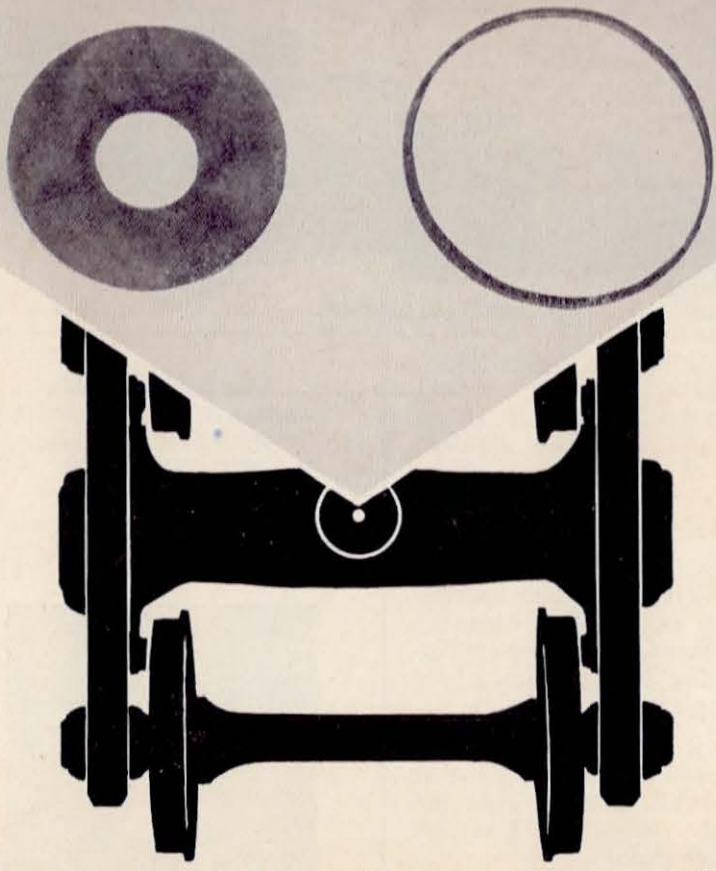
1123 S.E. Military Drive
P.O. Box 14147
SAN ANTONIO, TEXAS 78214
AREA CODE 512 WAlnut 3-4317

Circle 27 on reader service coupon

ROL-MAN

High Carbon 11%-14% Manganese Steel

CENTER PLATE WEAR LINERS



BEST... by tests and operating results

Extensive tests and long road service experience on many major railroads afford convincing proof of the superiority of ROL-MAN manganese steel center plate liners. They outlast the best of all other steels up to 6 to 1 on freight cars of all sizes. A work-hardening steel, ROL-MAN has the greatest resistance to severe wear and heavy impact of any known steel. THE HARDER IT WORKS—THE HARDER IT GETS! It continuously work-hardens under impact to a surface hardness of 65 Rockwell C without any loss of strength or toughness. Improved "rollability" and increased availability of freight cars, better overall truck performance and reduced maintenance are important benefits of using ROL-MAN center plate wear liners. Specify ROL-MAN center plate liners for bolsters on your new rolling stock. Contact us regarding any liners and wear plates required for your cars and locomotives.

Send for illustrated technical bulletin of ROL-MAN wear parts for freight cars and locomotives.

MANGANESE STEEL FORGE CO.

Richmond St. & Castor Ave.
Philadelphia, Pa. 19134

ROL-MAN

Circle 28 on reader service coupon

Piggyback cuts melon L&D

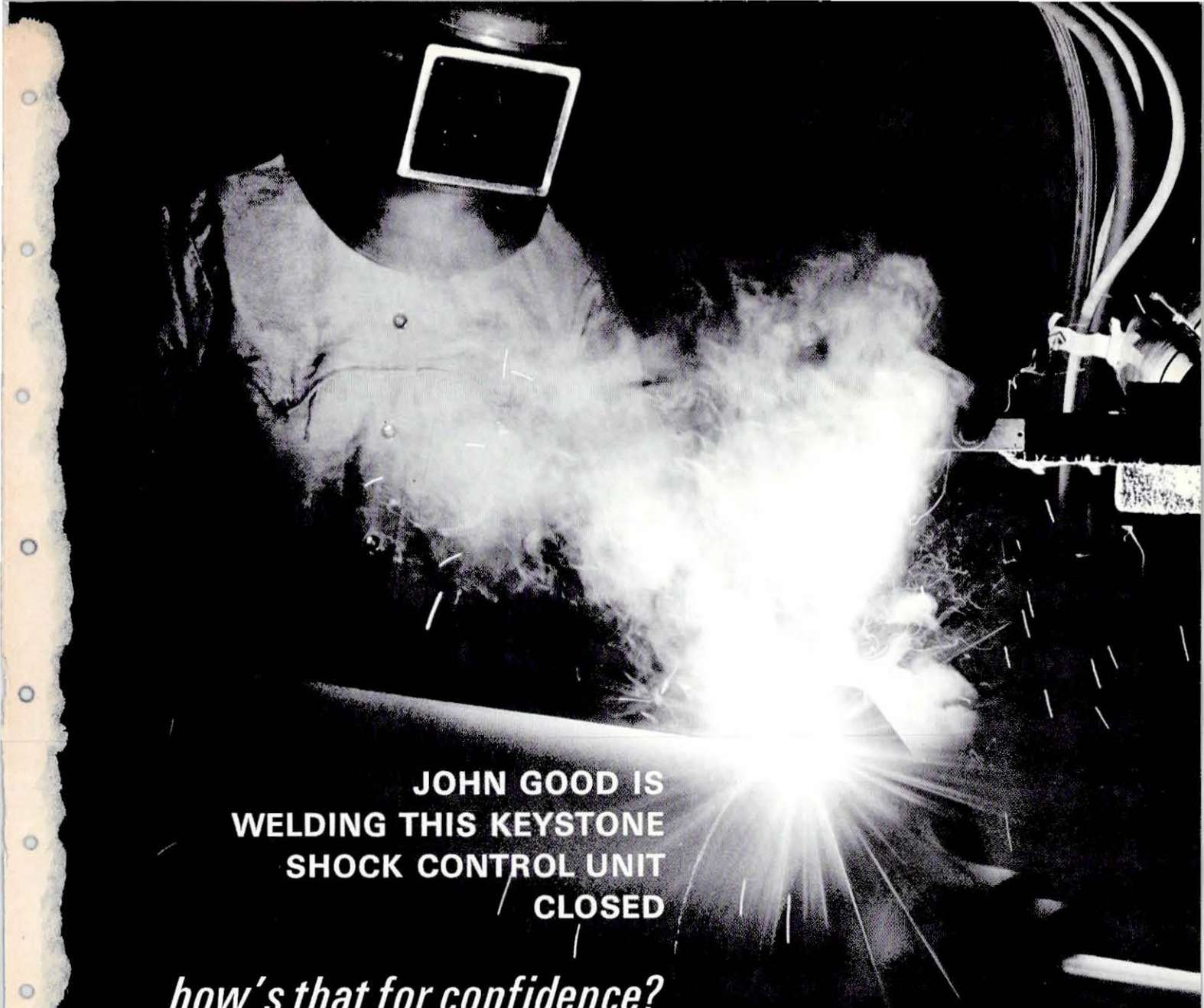
(Continued from page 41)

from REA Express. These were built to the ACL's specifications and bear ACL markings, making a total of 3,000 trailers with ACL marks suitable for melon service. In addition, REA had 500 more trailers built to ACL specifications, but these do not carry ACL markings and, after their first trip, may or may not come back for watermelon loading.

The new trailers put in service this year are ideally suited to melon traffic, but they are also designed for general purpose use. A specific sales effort being made to insure return loads is bearing fruit in avoiding much empty mileage. These trailers are semi-insulated, with four vents at each end, plus five specially-designed restraining bars with 12-in. plyboard attached to each bar. This new type of restraining bar brings further economies to shippers in that it eliminates the necessity of equipping the trailers with backup boards.

• **Return loading.** A campaign to have receivers clean out the trailers to make them more readily available for loading of merchandise on the return trip is meeting with some success. At a general session of the Watermelon Growers & Distributors Association held in New Orleans in March, the railroads were invited, among other things, to discuss the advantages to shippers of doing this. It was pointed out that the practice—since it makes securing a return load easier—would have its effect in causing the railroads to continue to be interested in enlarging their fleets of trailers for the watermelon movement, and at a cost to the user that should enhance the orderly marketing of melons. Railway representatives showed the watermelon people that it was simply a matter of economics. With a definite limit on the amount of capital available for purchase of new equipment, sound investment must be considered and money spent where the best return appears likely.

At the same meeting the railroads pointed out that rail TOFC movement supplies additional flexibility in unloading because of the ability of consignees to detain trailers coming in by rail at their plants; because of the free allowance of 24 hr. or more on such trailers, and a detention charge thereafter of only $10 per trailer per day. That's "mighty cheap warehousing" as one railway representative put it. ■



JOHN GOOD IS WELDING THIS KEYSTONE SHOCK CONTROL UNIT CLOSED

how's that for confidence?

KEYSTONE SHOCK CONTROL units are welded *closed* because it's not necessary to open them during a lifetime of normal service.

What's inside? Just one moving part—the integral rod and piston—the key to KEYSTONE SHOCK CONTROL'S superior performance and reliability. One more reason why your cars should be equipped with KEYSTONE SHOCK CONTROL.

KEYSTONE RAILWAY EQUIPMENT COMPANY

Offices: 310 South Michigan Avenue • Chicago, Illinois 60604

Manufacturing: Camp Hill, Pennsylvania 17011

Sales Offices: San Francisco, California • Chicago, Illinois • St. Paul, Minnesota • St. Louis, Missouri • Omaha, Nebraska
New York, New York • Philadelphia, Pennsylvania • Springfield, Virginia • Montreal, Quebec, Canada • Mexico, D.F.

ONE OF A SERIES

George Westinghouse, patented the air brake and founded the Westinghouse Air Brake Company in 1869 when he was just 22 years old.

Important First in Railroading

The Steubenville Accommodation Train, operating out of Pittsburgh on the old Panhandle Railroad, put George Westinghouse's air brakes to their first real test. With frightened horses rearing, a farmer's wagon stood directly over the track ahead. "Brake Down" the engineer whistled to his brakemen and at the same time pulled the lever of the new air brake system. Before his brakemen could even begin to tighten the hand brakes, the new air brake brought the train to a stop, just in time to save the first of many lives to be credited to the speed and reliability of the new system.

This was an important *first* in railroading. The air brake eliminated the necessity of brakemen hopping from roof to roof of careening cars to tighten down brakes, an extremely dangerous assignment under any conditions.

Further improvements to the unit were made in 1872 when Westinghouse redesigned it to operate from a compressed air reservoir. This assured dependable operation even though the compressor might fail or a supply line rupture.

More recent innovations like the KEYSTONE SHOCK CONTROL have done much to increase the safe handling and damage protection for lading and railroad equipment. Like the air brake, this KEYSTONE SHOCK CONTROL Sliding Center Sill Cushioning System has earned its reputation "*First in Reliability*" through user experience. Proved results taken from millions of impacts made in actual freight revenue service have established the superior cushioning efficiency and protection provided by KEYSTONE SHOCK CONTROL.

Give your cars and lading the maximum protection provided by KEYSTONE SHOCK CONTROL and enjoy its superior performance with absolute minimum maintenance. Write or call:
Keystone Railway Equipment Company,
310 So. Michigan Avenue, Chicago, Illinois 60604.

Only Keystone PORTLOC Gates provide easy, no-bind operation with this self-cleaning action...

here's why...

The unique open-rack on each side of Keystone Discharge Gates cannot plug up and bind because the pinion teeth actually force dirt and debris through the rack openings as the door is opened or closed. And, the push-pull action makes the opening and closing of this gate easy and positive.

Keystone Covered Hopper Car Center Discharge Gates handle a wide variety of materials, provide fast, complete discharge and can be operated from either side of the car. All component parts are easily inspected and readily accessible for thorough cleaning.

Have your Keystone Representative show you how these simple operating, versatile gates can *cut your unloading time, help improve your car utilization.*

Keystone PORTLOC Side Discharge or Center Discharge

Keystone Vacuum Gravity Portloc

Keystone 3 to 1 Gear Drive Portloc

Keystone Quick Dump

KEYSTONE RAILWAY EQUIPMENT COMPANY

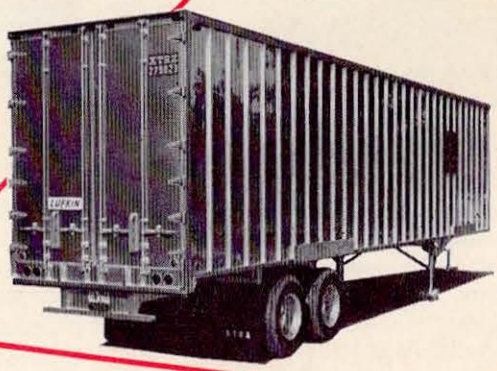
Offices: 310 South Michigan Avenue • Chicago, Illinois 60604

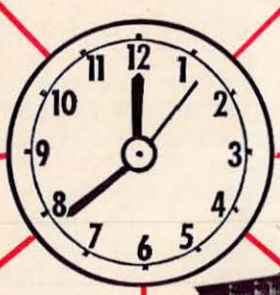
Manufacturing: Camp Hill, Pennsylvania 17011

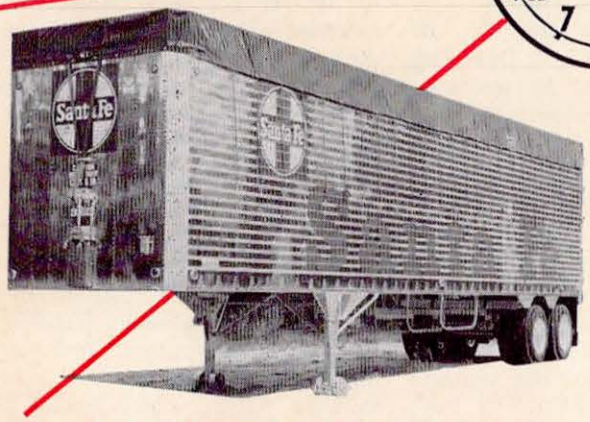
Sales Offices: San Francisco, California • Chicago, Illinois • St. Paul, Minnesota • St. Louis, Missouri • Omaha, Nebraska New York, New York • Philadelphia, Pennsylvania • Springfield, Virginia • Montreal, Quebec, Canada • Mexico, D.F.

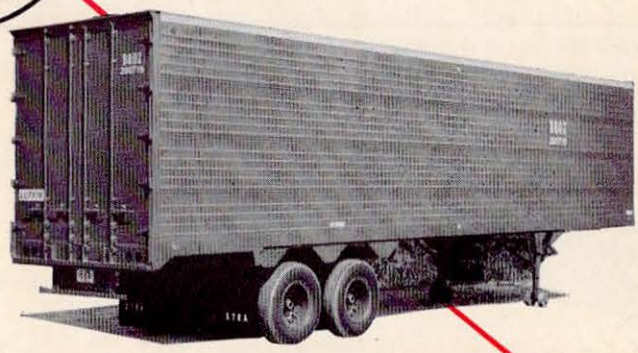
DEPENDABILITY

AROUND THE CLOCK



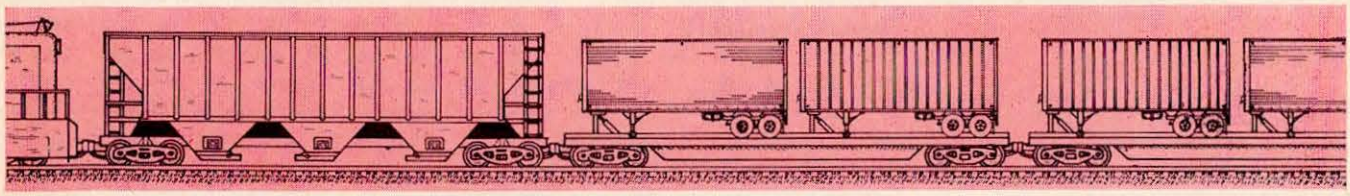






LUFKIN TRAILERS

BUILT FOR *PIGGY BACK* SERVICE IN ALL MODELS



LUFKIN TRAILERS
Division of
LUFKIN FOUNDRY & MACHINE COMPANY
LUFKIN, TEXAS 75901

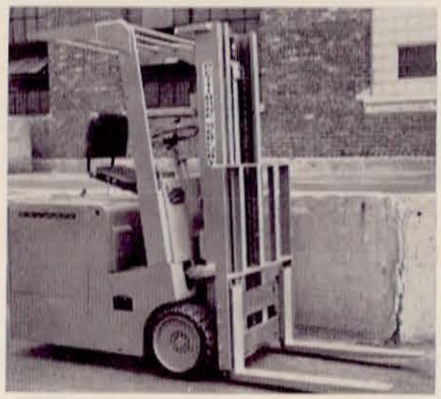
RAIL SALES: *WRITE BOX 848, LUFKIN, TEXAS 75901*
Branches In
LUBBOCK • HOUSTON • DALLAS • SAN ANTONIO
MEMPHIS • JACKSON, MISS. • OKLAHOMA CITY • SHREVEPORT
BIRMINGHAM, ALA. • ATLANTA, GA. • KANSAS CITY, KANS.

Circle 30 on reader service coupon

NEW **PRODUCTS** REPORT

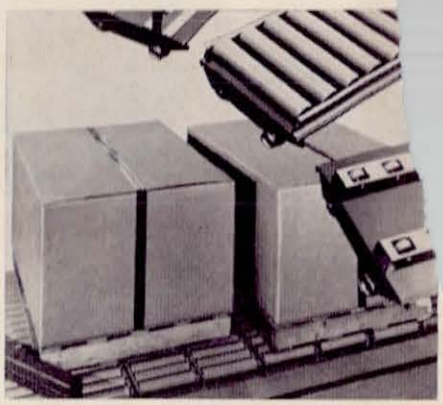
Van Containers (RA-1)

Outside dimensions of the Evans inter-modal van containers are 20 x 8 x 8 ft; cubic capacity, 1,120 ft; gross capacity, 44,800 lb. Containers, which meet the standards of the American Standards Association and the International Standards Organization, are constructed of ¾-in. plywood sandwiched between sheets of polyester fibre glass and framed in aluminum. Sides and roofs are seamless. The units are equipped with fork lift-pockets. *Evans Products Co.*



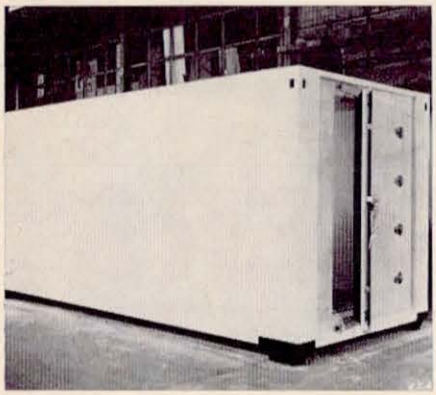
Fork-Lift Truck (RA-2)

The Model 401-S electric fork-lift truck features solid-state control or magnetic contactor type travel control with timed acceleration and controlled plugging. It weighs 4,000 lb and has a turning radius of 64 in. Maximum travel speed is 6.8 mph. Maximum lift speeds are 100 fpm empty and 63 fpm loaded. Standard, high free lift, or triple-lift masts may be had. Operating components are reached by removing detachable panels. *Pettibone Mulliken Corp.*



Conveyors (RA-3)

Crates, pallets, or containers can be transferred on or off Transflo Armorbelt conveyor at full speed "without any reduction of gap between loads and without any turning of load." Belt widths are 12 in. to 12 ft; lengths to 500 ft; and operating speeds from 1 in. to 100 ft per min. Height of leg-mounted units is 16 in. minimum for Armorbelt with 6-in pitch belt links; 27 in. for 12-in. pitch. Roller, wheel, and Palletflo are basic transfer tops. *M-H Standard Corp.*



New Container (RA-4)

The new Monox Refrigerator Cargo Container is made under a patented process providing for molding the entire container as a single unit. The container has reinforced plastic surfaces, inside and out, and a urethane insulating core. It is said to be stronger than steel, lighter than aluminum, absolutely resistant to moisture penetration, and fully sanitary. The container will not rust, rot or corrode. *Litewate Transport Equipment Corp.*

Tank Heaters (RA-5)

Perfex tank heaters, designed primarily for storage tanks and railroad cars, are said to reduce the viscosity of heavy fluids for easier handling. Both the vertical and horizontal types will fit through a standard API 20-in. manhole and can be carried by two men. Maximum pressure is 1,000 psig; maximum temperature, 650 deg. F. Standard stock tank heaters have 5/8-in.-high, 0.030-in.-thick helical aluminum fins spaced 6 to the inch. *Perfex.*

RAILWAY AGE
THE TRANSPORTATION WEEKLY

30 Church Street, N.Y., N.Y. 10007 READERS' SERVICE (Att. George Johnson)

PLEASE SEND ADDITIONAL INFORMATION ABOUT PRODUCTS IN ADVERTISEMENTS NUMBERED: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

PLEASE SEND INFORMATION ABOUT PRODUCTS DESCRIBED ON PAGE 66 MARKED: RA-1 RA-2 RA-3 RA-4 RA-5

NAME ..... TITLE.....

COMPANY .....

ADDRESS .....

CITY ..... STATE..... ZIP.....

6/26/67

☐ Please send information about subscribing to Railway Age

ow do you deal with riveline shock and vibration?

Lord knows.

High-capacity railroading puts new emphasis on performance. Power-transmission systems must operate at top efficiency, function smoothly and quietly for hundreds of thousands of miles.

Lord flexible drive couplings meet this need. They isolate torsional shock and vibration in locomotive drive trains, reducing wear, preventing damage, and extending service life.

Lord knows how to deal with the other dynamics of steel wheel-on-rail transportation, as well. We know how to cushion impacts. How to provide motion without wear. How to protect sensitive equipment. How to eliminate the need for lubrication with elastomeric parts.

This know-how has made us part of look-ahead railroading. Our products are specified as original equipment on many types of rolling stock.

If you have a vibration/shock/noise problem, we will be happy to help you work out a solution. Call or write: *Railroad Products Group, Lord Manufacturing Company, Division of Lord Corporation, Erie, Pennsylvania 16512.*

LORD®

Circle 34 on reader service coupon

Why spend the capital to buy it?

Let's face it, the purchase of a Servosafe® Hot Box Detective System is a capital investment. When you buy such a system you're going to be spending a substantial amount of money.

The thing to remember is that you're not buying hardware alone—you're buying *a data processing cost control system!* Compare the cost of a Detective System with that of a small computer, and you'll realize it's a relatively modest investment. For that investment you can have a record of every journal that has passed the scanners.

And for that investment—because of the very nature of the system—bearings that are running hot are located so that something can be done about them before they fail. Records show that only one out of ten abnormal journals detected by the Hot Box Detective System has needed a new wheel set. With the old visual detection methods, nine out of ten journals had to have a new wheel set. The savings in repair and shop work can be immense!

To be blunt, you buy our system to avoid one of the greatest capital losses a railroad faces—a wreck. Our system locates hot boxes before they result in axle burnoffs that are the largest single cause of derailments.

You can't—and we can't—estimate the cost of a wreck in advance. We can only quote what one railroad official said to us: *"... Save one wreck ... and the Servosafe Hot Box Detective System has paid for itself."*

If cost control is a prime management objective for you, consider the Servosafe Hot Box Detective System. We'll be glad to answer all your questions about it. Write us at the address shown at right. Or call collect.

What spacing should I use?

What are your road conditions? Train speeds? Axle loadings? The placement of Servosafe Systems depends on many factors which must be analyzed before making recommendations.

For example, operating experience often indicates a higher incidence of hot boxes at certain critical points. Servosafe systems installed at the approaches to such locations greatly reduce burnoffs and hot box derailments. Servosafe installations spaced 20 miles apart form an almost foolproof hot box detection network.

Where Centralized Traffic Control increases the need to keep stock rolling over critical lines, Servosafe Detectives placed in advance of sidings screen out potential bottlenecks and make for smoother, more efficient operations.

Other specialized locations include the approaches to bridges and tunnels. Damage to these structures can pyramid the already high cost of hot box derailments.

Whatever spacing requirements your system demands, a Servosafe® Hot Box Detective system is your answer to hot-box detection. Servo will be glad to answer any questions you have about it. Write us or call collect.

Is it flexible? Can I add to it or modify it?

Every railroad is different. With different operating conditions and different safety standards that are changing every day.

It's for this constant modification and expansion that the Servosafe® Hot Box Detective System is designed. As your railroad changes, Servo's modular design concept permits the addition of any standard Servo components. You can add automatic alarms, carrier systems, visual hot box locators, failure indicators, test equipment, and time and date printers at any time. All without fear of obsolescence. And by modular replacement, you can easily upgrade your present Servo system with our new improvements.

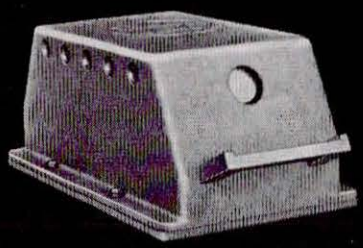
Servo not only permits the flexibility you'll need, Servo specialists will work right along with your engineers to expand the capability of your present hot box detection system to suit your needs exactly.

Got any other questions on hot box detection? Just drop us a line, or call. We'd like to give you the answers.

MEMBER RPI RAILWAY PROGRESS INSTITUTE

Circle 31 on reader service coupon

The Servosafe® Hot Box Detective System



Write for a free brochure on the Servosafe Hot Box Detective—the electronic journal bearing monitor that cuts railroad operating costs. Servo corporation of america, 111 new south road, hicksville, new york 11802, 516-938-9700

servo

LETTERS FROM READERS

D.O.T. and the railroads

Philadelphia, Pa.

To the Editor:

You are to be congratulated upon your enterprise in securing a comprehensive interview from the newly appointed head of railroad activities in the Department of Transportation, as published in your issue of May 22.

From reading the article, I was not impressed with the grasp this man seems to have upon some of the practical railroad problems like the car shortage and the relations between management and the labor organizations.

His explanation of how the recommendations of his division were to be processed within the department prior to their submission to the Congress, did not impress me as being likely to produce the kind of specific suggestions which have characterized those of the ICC over many years.

I was rather amazed at his attitude toward violations of the Railroad Safety Code which the ICC has administered since the Congress adopted it. I participated in enforcement activities at the ICC for nearly 25 years as a lawyer in areas other than those of safety. However, I do not understand how such a code can be enforced other than by bringing the penalty suits provided for under the Acts.

I read your magazine every week as it affords me the opportunity to keep abreast of the important matters taking place in the railroad industry of which I am not apprised since I retired from the service of the ICC.

Glenwood W. Rouse

The AAR's new chief

Washington, D. C.

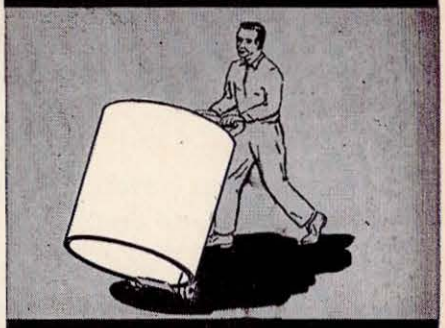
To the Editor:

The story in the June 5 issue [The AAR gets a new chief: A public-relating railroad, pp. 18-19] proved to me when I read it that I was still capable of blushing—but don't think I didn't like it!

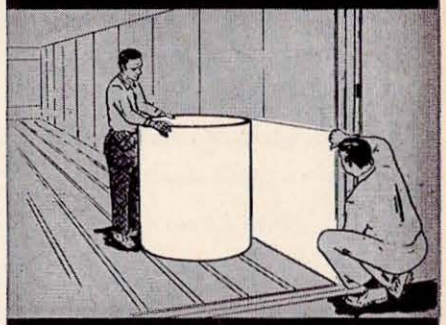
Seriously, I do appreciate the combined send-off and introduction, and I will probably need it. This new job is a great challenge, but I welcome it. To be spokesman for a growing, dynamic industry, as the AAR president has to be, gives me a bigger chance to speak up for the industry I love, and with the good wishes of you and your fine staff at Railway Age I am going to wade in and do my best.

Thomas M. Goodfellow
President
Association of American Railroads

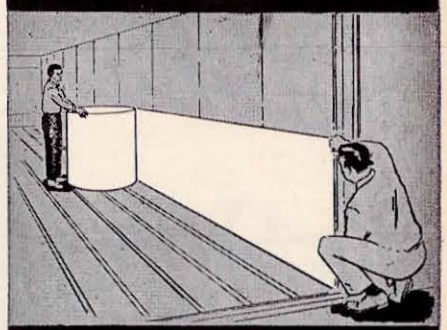
GLASBORD®



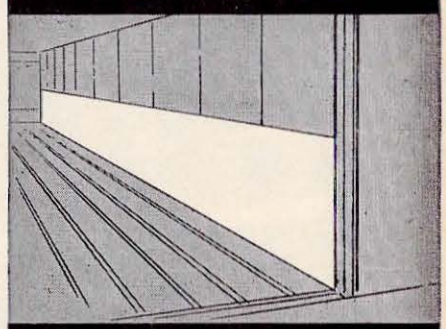
SCUFF PLATE



IS AVAILABLE



THE LENGTH



OF YOUR UNIT

High strength, Glasbord Scuff Plate for piggy-back trailers, containers, freight cars. Dry freight and refrigerated vans — M.I.D. Accepted.

For complete details request Bulletin No. 67.

kemlite **KEMLITE CORPORATION**

P.O. BOX 429, JOLIET, ILLINOIS 60434

Circle 32 on reader service coupon

Hardtop Convertibl

Republic Coil Covers lift *on* for closed car protection, lift *off* for open car material handling. This doubles the flexibility of your open rolling stock. And lets you offer shippers closed car protection anytime.

The 7 by 7 by 22 feet hood-type covers are big enough to protect 84" diameter steel coils from rain, sleet, or snow. Air vents at each end encourage circulation, reduce condensation.

Special stacking brackets keep Republic Coil Covers neat and tidy near trackside, ready for instant use. Tough 13-gage, reinforced steel construction resists accidental crane damage. And inspection doors permit random checks of cradle and hold-down devices without hoisting the cover.

Republic also has three-section gondola covers that fit all standard gondolas. With weather seals between adjoining sections to keep the wet out and the dry in. Plus clamps and centering pins to hold covers tight during transit.

Write Manufacturing Division for more information and specifications.

MANUFACTURING DIVISION
REPUBLIC STEEL CORPORATION
Youngstown, Ohio 44505

The Man From Manufacturing*

*A Trademark of Republic Steel Corporation

Circle 35 on reader service coupon

Have You Heard About VISTIK®?

VISTIK produces viscous aqueous solutions at concentrations of less than 1%.

What does that mean?

It means you can sharply reduce the amount of drift from herbicide sprays!

How is VISTIK used?

Following label recommendations, for 100 gallons of spray mix you would use Vistik in these amounts:

3.25 lbs.—for mist-blower applications.
3.5 lbs.—for handgun applications.
5.0 lbs.—for helicopter applications.
5.25 lbs.—for air carry sprayers.

How much time does it take to mix VISTIK?

About ten minutes!

Will I need costly equipment and special gadgets?

No!

Is VISTIK expensive?

No! It is the least expensive thickening agent.

Can I see a VISTIK demonstration?

Yes! A Hercules technical representative will be happy to show you an 11-minute color and sound movie which shows VISTIK being sprayed by helicopter, by handgun, and by truck. He can also arrange to run a field trial for you whenever you desire.

Any more questions?

Cellulose & Protein Products Department, Hercules Incorporated, Wilmington, Delaware 19899

Circle 36 on reader service coupon

Faster trains? Baloney! Let's talk about faster cars.

Everybody's trains go faster than they used to. But freight cars on the Frisco are moving more than 50% faster than the average for the rail industry. The reason is simple–no more loafing around terminals. We've already cut delays more than 25%. Our computer-assisted quality control team has whipped our freight equipment into top form. That's why cars are running faster on Frisco–the quality control railroad.

When your freight goes FRISCO **your freight goes!**

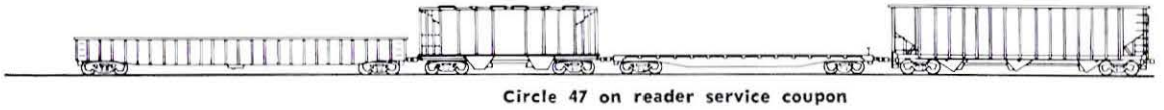
Circle 23 on reader service coupon

Major source for parts that duplicate the originals

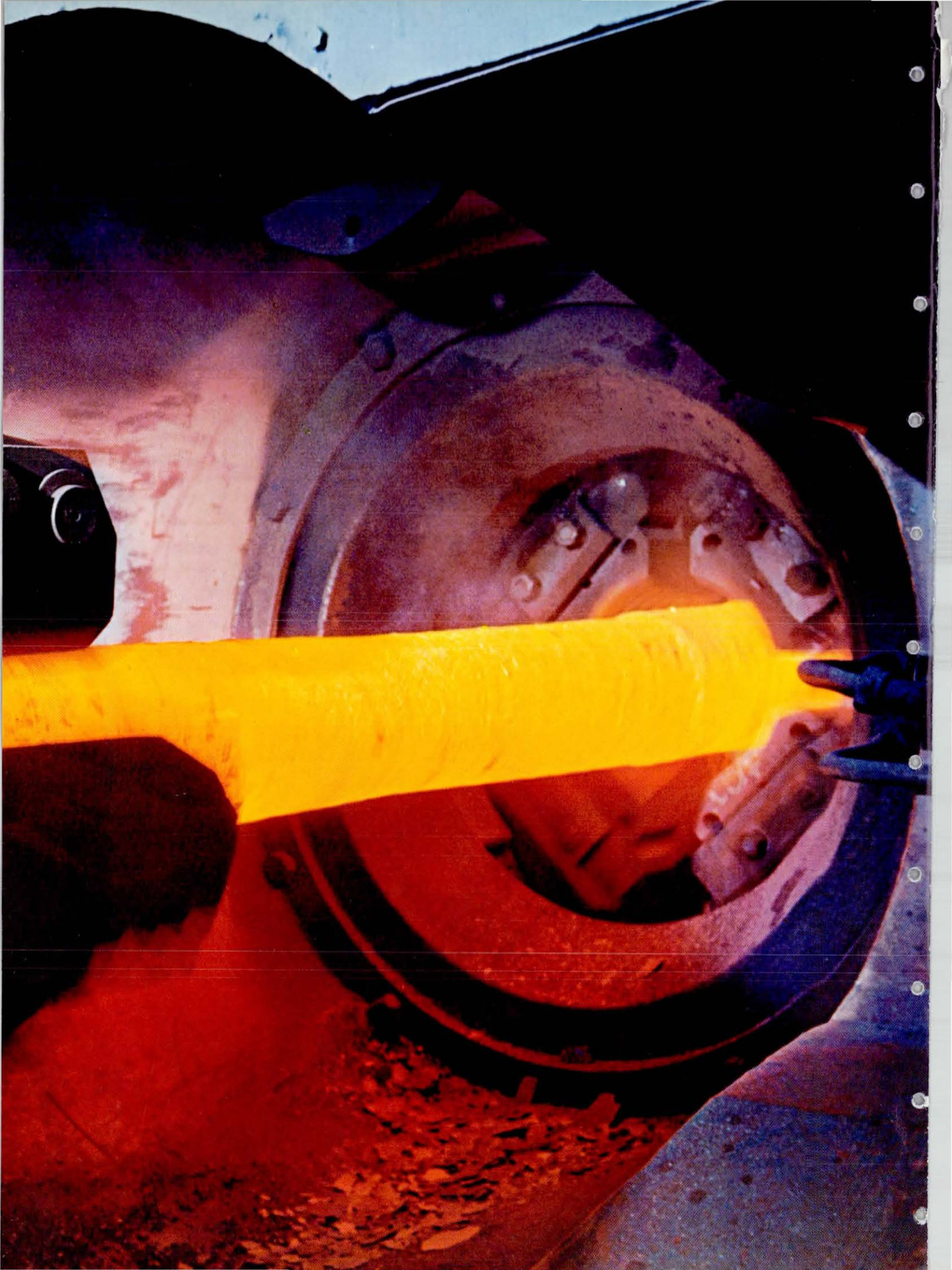
Competitively priced repair parts from Greenville match the originals in every respect, regardless of who made them. Strict adherence to dimensions and tolerance helps you reduce installation time and gives you lower total repair costs. Grab irons, side stakes, hopper doors or complete rebuilding packages (including assembled sides, ends and under frames, etc.)—Greenville fabricates them all and delivers them to match your repair schedules. Send your prints or call direct for quotes and deliveries. The nation's most experienced carbuilders are at Greenville. They will get your parts to you on time.

GREENVILLE

STEEL CAR COMPANY
Subsidiary of Pittsburgh Forgings Company
GREENVILLE, PENNSYLVANIA



Circle 47 on reader service coupon



From U.S. Steel: first automatic precision impact-forged railroad car axles

U. S. Steel now has the world's most modern railroad car axle production line. Our program-controlled impact forging machine (left) is the first of its type and size for railroad car axle production. Square steel bloom stock passes through the forging box where four hammers forge it simultaneously. This quickly converts the bloom into a rough axle of predetermined size and shape. Result: uniform concentricity, consistent quality axles.

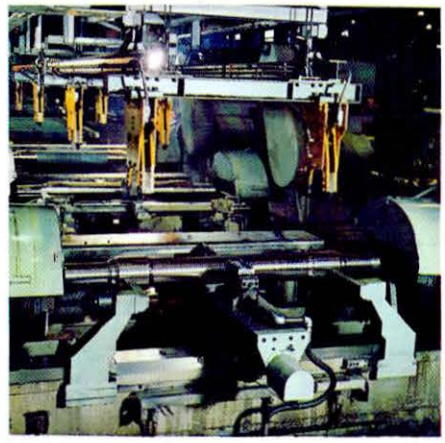
The heat-treating line is a continuous type with three furnaces. It automatically controls the temperature and the rate of flow of each axle. Result: the same characteristics duplicated in axle after axle.

In the three-station lathe, each axle moves progressively through all operations. Three axles are machined simultaneously—one at each station. Result: uniform axles time after time.

For more information, contact our nearest sales office. Or write United States Steel, Room 4670, 525 William Penn Place, Pittsburgh, Pennsylvania 15230.

Precision impact-forging machine, above and at left, has four hammers that shape axles from red-hot blooms.

A lineup of forged axles leaves the heat-treating line.



The multi-station lathe turns three axles simultaneously.

USS TRADEMARK

United States Steel: where the big idea is innovation

AARS meets this week

(Continued from page 48)

damage cost and in the cost of resultant lost-time with these specialized cars."

The committee's summary of the equipment factor in derailments: "Major consideration must be given to protection of equipment. . . . On roads where heavy grading equipment is used to assist in clearing wrecks, the additional damage to rolling stock could be far out of proportion to the advantages received from use of such equipment. These [specialized] cars can be rerailed or trucked with the use of special slings, cradles and other wrecking devices—and mainly, to be sure, with know-how gained through experience."

• **The learning process.** As for derailment prevention, the AARS team takes a case-history approach, with eight specific examples of how roads reacted to problem situations. And the one common element in all the incidents: A painstaking study to determine cause before any new procedures were initiated or new operating conditions created.

The other four AARS reports are on both familiar and relatively unfamiliar topics. One committee, headed by Grant C. Vietsch, executive director of the Railway Systems and Management Association, explores the merger area. Another group, under the direction of Great Northern Superintendent R. H. Shober, digs into the subject of investigations and discipline.

Two committees are concerned with the operating officer's relationships with supervisors in other departments. One group, headed by W. B. Vander Veer, assistant general manager, Chesapeake & Ohio/Baltimore & Ohio, takes a look at the links with the personnel and labor-relations departments; another, headed by C&O/B&O/B&OCT Superintendent W. J. Booth, talks of the industrial engineer's role in operations.

Vander Veer's committee notes the pressures for wage-and-benefit improvements and declares that "steps must be taken to work closely with the personnel department to obtain improvement in efficiency, thereby reducing expenses, which, in turn, will offset the high increase in the cost of labor. Each new benefit obtained through negotiations requires that management come forward with more enlightened methods of operations in order to reduce expenses."

Recommendations cover close cooperation between operating-and personnel-department people; surer knowledge of labor agreements by operating supervisors; a firm and knowledgeable approach to the handling of claims. And the committee lands hard on the subject of work-rules modernization.

• **About those rules.** The "assignment" given labor-relations men in the report is a real package. In the language of the report: "It is felt that railroad management should have the personnel department officers assigned to labor negotiations devise new methods of payment for the employees other than the time-mileage basis; that arbitraries be eliminated or consolidated to avoid the tendency for employees to perform inefficient work to achieve additional payments; and that our labor personnel take positive and direct action in negotiations with the organizations to obtain modern seniority districts that will not restrict crew operations to a matter of three or four hours of running time for a day's pay."

Dissatisfaction is also reflected in comments regarding the spreading of information on changes in agreements: "Each new labor agreement that is entered into between management and the organizations should be fully explained to all operating personnel, down to and including officers of each division. It seems in almost all cases that the organizations have full knowledge of the various agreements entered into, particularly at the local-chairman level, before the local division officer has received information on the rules and interpretations of the agreements. The officer is placed in a poor bargaining position by the lack of knowledge of the agreements in dealing with the local chairman on labor-relations matters on the division level. The only way to truly combat the increasing number of time claims being presented daily is for local operating officers to have full knowledge and understanding of the labor agreements and to be able to impress upon the employees that with this knowledge it is a waste of everybody's time to place time claims before management that have little or no merit."

The report contends that "the increasing tendency of the organizations to time-claim everything and then place the burden of proof upon management is costing considerable additional expense. Operating officers have to spend a good portion of their time performing so-called paperwork, rather than seeing that the division operates efficiently. Why not penalize the organizations for invalid claims?"

• **How IE can help.** The AARS committee looking at industrial engineering also recommends coordination: "There exists a great opportunity to move the railroad forward, efficiently and economically, provided that a close degree of cooperation can be developed between the superintendent and the industrial engineer." As the committee notes, however, "the experience of several roads indicates that this relationship is not always harmonious. Reasons for this can be many and varied—such as, just where does the industrial engineer fit into the organization?"

Booth's group lists seven major areas where industrial engineers and line operating officers can make studies leading to improvements—in establishing terminal standards; establishing reporting procedures; improving crew-utilization procedures; improving blocking policies and practices; improving methods and layouts in mechanical, maintenance-of-way and freight-house activities; analyzing special projects; and simulating rail operations.

For its '67-meeting tour of railroad facilities, AARS has arranged a plant tour at Thrall Car, Chicago Heights, for the afternoon of June 28. ■

DIFFERENTIAL AIR DUMP CARS

CARRY MORE - WEIGH LESS!

MAINTENANCE OF WAY . . . ideal for ditching, rip-rapping, widening banks, and power shovel work.

REVENUE SERVICE . . . fast economical bulk handling for unit train or fast turn-around applications.

8-second dumping — all-welded construction — sizes to 70 cu. yds.

Write for bulletin D-59

DIFCO, Inc. Box 238, Findlay, Ohio 45840, U.S.A. Ph. (419) 422-0525

Circle 37 on reader service coupon

A NEW LIFT FOR AMERICAN INDUSTRY

As easily as a giant cat moving kittens, this newly designed machine loads highway trailers on a rail car...helping to push piggybacking to successive records.

Specialized equipment typifies the railroads' breakthrough in freight transportation technology: push button yards...microwave communications...automated traffic control.

Such advances produce the efficiencies that help hold down the cost of living... keep railroads ahead of the nation's growing transportation needs.

ASSOCIATION OF
american railroads

Circle 38 on reader service coupon

Talk to somebody who owns and operates one when you want information about aluminum unit trains. We'll listen.

Then we'll talk back. Tell you about annual tonnage, distance, car capacity, turn around time, maintenance, facilities, tariffs, residual values—the list is plenty long.
Every unit train operation has to be considered on its own. Ideally, by the seller, hauler and user of the freight involved. But start by contacting us. We're running the country's largest privately owned fleet of open hopper aluminum railroad cars right now. Helped design them. Helped build them. And supplied our own aluminum for them. Naturally. And we'll pass our experience along.
We're not timid about our motives for doing it. We design, fabricate and sell aluminum plate, sheet and extrusions for all types of railroad cars. Open top and covered hopper. And tank. Write The Dow Chemical Company, Metal Products Department, Midland, Michigan 48640.

DOW

John W. Lovett
D&RGW

C. E. Baldridge
D&RGW

Richard F. Beck
EJ&E

Samuel A. Alward
L&N

John A. Bailey
NWU

Palmer Bayer
REALCO

PEOPLE IN THE NEWS

ASSOCIATION OF AMERICAN RAILROADS.—William D. Mahoney, district manager of the Car Service Division at Dallas, Tex., has been named St. Louis district manager to succeed **Lloyd A. Dickson,** who will retire June 30 after nearly 47 years of railroad service. **J. Steward Swift,** assistant district manager, St. Louis, succeeds Mr. Mahoney at Dallas. **H. D. Summers,** assistant to manager, Open Car Section, Washington, D.C., since 1964, succeeds Mr. Swift at St. Louis. **P. A. Terrels,** car service agent, Philadelphia, since 1963, succeeds Mr. Summers at Washington.

CANADIAN NATIONAL.—J. C. King, assistant engineer of bridges and structures, appointed engineer of bridges and structures, system, succeeding **T. H. Jenkins,** retired. Mr. King will report to **G. H. Workman,** assistant chief engineer design and construction, Montreal.

A. E. Street, manager, Saskatchewan Area, Saskatoon, appointed manager, Southwestern Ontario Area, London, succeeding **C. F. Armstrong,** promoted.

CHICAGO & EASTERN ILLINOIS.—Charles W. Michel apointed director of coal traffic, Chicago. He was formerly coal traffic manager, **Missouri Pacific,** St. Louis.

CHICAGO & NORTH WESTERN.—E. H. Brobst, superintendent, Dakota division, Huron, S.D., named assistant general manager, Chicago. **E. B. Wilson,** superintendent of stations, advanced to assistant general manager—administrative services, Chicago. Mr. Brobst's successor is **O. W. Brookes,** superintendent, Lake Shore division, Green Bay, Wis., who in turn is succeeded by **J. C. Black,** transferred from the Wisconsin division, Milwaukee. **R. P. McDonough,** superintendent, Galena division, Chicago, replaces Mr. Black, and in turn is replaced by **A. H. Malecha,** trainmaster, Galena division, West Chicago. Mr. Malecha's successor is **W. L. Arteman. L. A. Robertson,** superintendent, Nebraska division, Norfolk, Neb., named assistant superintendent-transportation, Chicago. **H. C. Hawk,** superintendent, Chicago Freight Terminal division, Chicago, succeeds Mr. Robertson. **F. J. Santore,** assistant superintendent, Chicago Terminal division, advanced to superintendent of the division. **C. R. Hellem,** trainmaster, Chicago Terminal division, replaces Mr. Santore, and in turn is succeeded by **J. A. Zito,** trainmaster, Wisconsin division, Kenosha, Wis. **G. M. Willoughby,** assistant trainmaster, Iowa division, Eagle Grove, Iowa, is Mr. Zito's successor. **G. R. Hanson,** trainmaster, Wisconsin division, Madison,

R. E. Budorick
REALCO

J. C. McIntyre
REALCO

Wis., becomes assistant superintendent of the division, with headquarters at Butler, Wis. **D. J. Owens,** trainmaster, Lake Shore division, Green Bay, Wis., promoted to assistant superintendent of the division. **R. M. Mason** named trainmaster, Chicago Terminal division, Proviso, Ill.

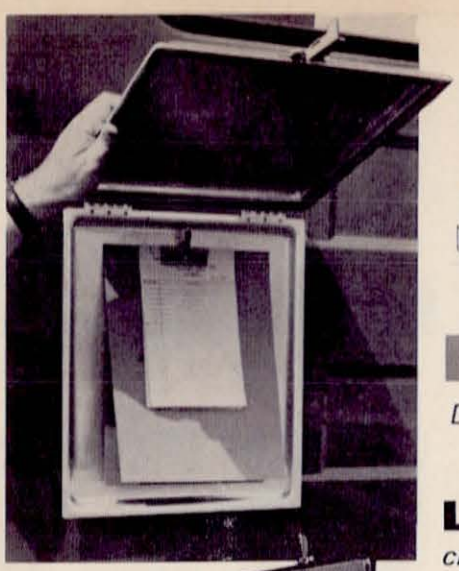
DENVER & RIO GRANDE WESTERN.—John W. Lovett, manager of labor relations, appointed director of personnel, to succeed **E. B. Herdman,** retired (RA, June 12, p. 30). Mr. Lovett's successor is **C. E. Baldridge,** assistant manager of labor relations.

G. A. Bennewitz, Jr., assistant to the director of operations and economic research, named market director-minerals, Denver.

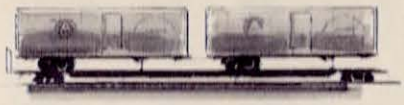
150,000 LBS. PLUS
on one SIDE BEARING demands the TOUGHEST
STUCKI

RPI
RAILWAY PROGRESS INSTITUTE

Circle 39 on reader service coupon



Perfect for keeping vital records safe at all times



HOGART "MITEY-LITE" LOG BOXES

Check these features—

- Strong-Durable
- Waterproof
- Lockable
- Convenient
- Easy to Install (Inside or outside tractor cab or trailer)
- Choice of Sizes
- Rust-Proof
- Built-in Spring Clips
- Maintenance Free

Perfect for trailer load records . . . or as a first-aid cabinet

Contact your local distributor or—

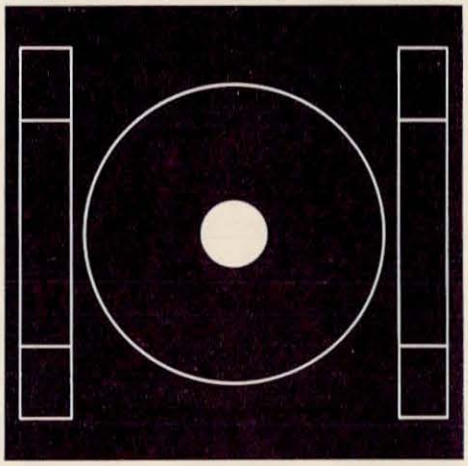
HOGART MANUFACTURING COMPANY

2246 THIRD STREET • WYANDOTTE, MICHIGAN 48192

"The Original Equipment Line" for Lifetime Lites and Reflectors—Tractor Cab Fender—"Mitey-Lite" Log Boxes—Diesel Exhaust Caps—etc.

Circle 40 on reader service coupon

Call PITTSBURGH for



Freight Car Center Plate Assemblies

Write for our latest Railroad Car Forgings Catalog
See 1966 Car & Locomotive Cyclopedia, Sec. 4, p. 340

AREA 412:264-4000

Engineered to your individual requirements and to AAR standards

Pittsburgh Forgings Co.

Railway Forgings Department

OFFICES: 407 THORNE STREET, CORAOPOLIS, PA. 15108

PLANTS: CORAOPOLIS, PA., and JACKSON, MICH.

Circle 41 on reader service coupon

DETROIT, TOLEDO & IRONTON-ANN ARBOR.—**Harry E. Bennett** appointed manager, industrial engineering, Dearborn, Mich.

ELGIN, JOLIET & EASTERN.—**Richard F. Beck,** assistant chief engineer, named chief engineer, Joliet, Ill., to succeed **Stuart H. Shepley,** retired (RA, June 12, p. 30).

ERIE LACKAWANNA.—**H. T. Little, Jr.,** appointed general yardmaster, Marion, Ohio.

LOUISVILLE & NASHVILLE.—**Samuel A. Alward,** staff assistant to the vice president-accounting and taxation, named director of data processing, succeeding **John E. Harmon,** who retires July 1 after more than 53 years' service.

MISSOURI PACIFIC.—**D. P. Harper** named assistant freight traffic manager-rates, Houston. He was formerly freight traffic manager, **Kansas, Oklahoma & Gulf,** St. Louis.

NEW HAVEN.—**Robert W. Brooks** appointed Canadian traffic manager, Montreal, to succeed **David T. Dunn** who resigned to accept a position with an industrial concern. Mr. Brooks is succeeded as traffic representative, Portland, Me., by **Don M. Colello,** formerly chief clerk there.

NEW YORK CENTRAL.—**H. G. Hohorst** appointed to a new position: director of operations planning, with headquarters at New York.

NORFOLK & WESTERN.—**Leo M. Klein,** assistant auditor of revenues, Western Region, appointed auditor of revenues, Western Region, with headquarters remaining at St. Louis. Mr. Klein succeeds **John H. Leckrone,** who has become auditor of revenues, Atlantic and Pocahontas Regions, Roanoke, Va. **Harold E. Lietz,** chief clerk, auditor of revenues, St. Louis, replaces Mr. Klein.

NORFOLK SOUTHERN.—**Wm. Fred Nation** appointed district sales representative, Room 942, Florida National Bank Bldg., Jacksonville, Fla. 32202.

PENNSYLVANIA.—**Desmond C. Gotschall** appointed manager, industrial development, Buffalo, N.Y., to succeed **Thomas C. Kirkland,** who is retiring after 47 years of service with the PRR. Mr. Gotschall has been assistant manager, industrial development, Pittsburgh, for the past two years.

B. Richard Harrington appointed assistant manager, industrial development, to serve industries in western Pennsylvania and eastern Ohio. Mr. Harrington's headquarters will be in Pittsburgh.

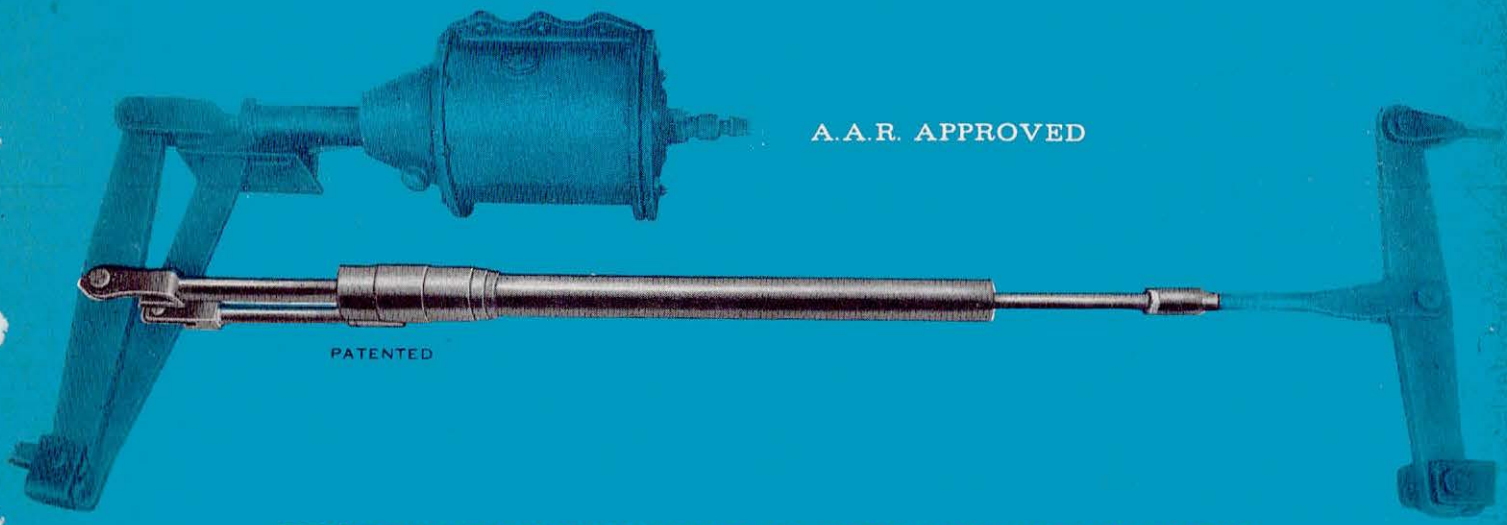
READING.—**J. Stewart Warden** appointed manager passenger services. Mr. Warden will be responsible for management and administration of all passenger service matters, reporting to the assistant vice president-finance. The position of manager planning and analysis, passenger services, has been discontinued.

REA LEASING CORP.—**Palmer Bayer,** vice president and general manager, elected president. **R. E. Budorick** elected vice president, operations, and **J. C. McIntyre,** vice president, administrative services. Mr. Bayer succeeds **R. C. Hendon,** who becomes vice chairman of the board and continues as vice president, industry affairs of **REA Express,** REALCO's parent company.

ROCK ISLAND.—**Paul J. Buhrow,** freight sales representative, St. Paul, named district manager-freight sales, Moline, Ill., to succeed **James R. Conway,** resigned.

Universal®

AUTOMATIC TWO-WAY BRAKE ADJUSTER



PROPER PISTON TRAVEL IS ALWAYS MAINTAINED!
DESIGN SIMPLICITY OF THE CONE CLUTCH
ASSURES TROUBLE-FREE PERFORMANCE!

Proper piston travel is maintained by shortening of the Universal Automatic Two-Way Brake Adjuster when wear occurs on brake shoes and wheels. The brake adjuster lengthens when brake shoes are renewed. No manual adjustments are necessary.

All parts are manufactured of metal and surpass A.A.R. Specifications for strength and safety. They are sealed from foreign particles, adding to service life.

Carefully researched and developed, this adjuster offers precision braking that will save operating time and maintenance costs for many years.

UNIVERSAL RAILWAY DEVICES COMPANY

332 S. MICHIGAN AVENUE, CHICAGO, ILL. 60604 • TELEPHONE 312-427-5051

CANADIAN CARDWELL CO., LTD., MONTREAL 2, QUEBEC

For all types of freight cars... SPECIFY FOR SAFETY—SPECIFY UNIVERSAL!

Circle 42 on reader service coupon

SANTA FE.—Richard Hale named architect, Coast Lines, Los Angeles, succeeding the late **K. M. Rhodes.**

R. E. Caldwell appointed trainmaster, Middle division, Newton, Kans., replacing **T. H. Linn,** on temporary leave of absence.

TRANSPORTATION CENTER, NORTHWESTERN UNIVERSITY.—John A. Bailey appointed director, effective Sept. 1, to succeed **William L. Garrison,** who will become director of the **Center for Urban Studies, University of Illinois Chicago Circle Campus.** Mr. Bailey has been chief administrative officer, **Southeastern Pennsylvania Transportation Authority,** Philadelphia.

A. A. Landry
CITL

J. R. Scanlin
GATX

M. B. Korodi
GATX

B. J. Gross
ACF

INDUSTRIAL TRAFFIC

Robert J. Casey has been promoted to midwest traffic manager, **International Salt Co.,** with headquarters in Chicago. Mr. Casey has been traffic assistant in the firm's Chicago office since 1965.

Albert A. Landry has been appointed general manager of the **Canadian Industrial Traffic League.** Mr. Landry has had over 20 years' experience in both industry and transportation. He was CITL treasurer several years ago. Mr. Landry succeeds **R. E. Gracey,** who resigned recently to enter the consulting field.

SUPPLY TRADE

J. R. Scanlin has been elected president of **General American Transportation Corp.,** to succeed **S. D. Moseley,** resigned (RA, June 19, p. 62). Mr. Scanlin was group vice president at **GATX** and head of its **Tank Car Division.**

Miklos B. Korodi has been named manager of product planning for the Freight Car Division of **General American Transportation Corp. Korodi,** formerly a regional sales manager, will coordinate research and development for new and improved designs for shipping and handling commodities in freight cars.

Bernard J. Gross has been elected vice president of marketing of **ACF Industries, Inc.** Mr. Gross, director of domestic and international marketing for the company's W-K-M Valve Division since 1955, assumes his new duties July 1. In addition to his staff function, he will supervise advertising, public relations, marketing services and international licensing.

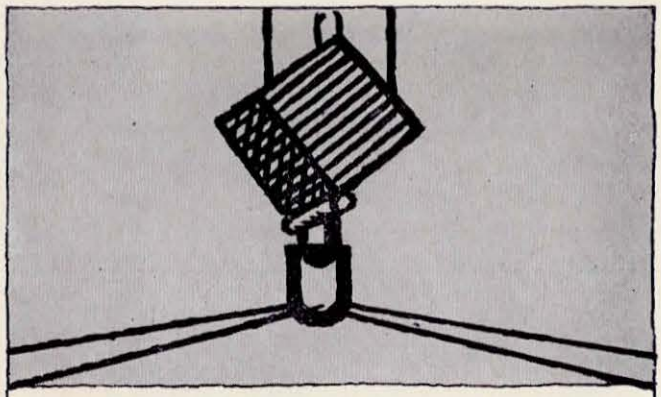
Robert A. Boerke has been elected vice president of engineering, **North American Car Corp.**

L. J. Scheiblauer has been named superintendent of **Griffin Wheel Co.'s** Bessemer, Ala., railroad wheel plant. Mr. Scheiblauer, who was senior engineer at Griffin's Chicago office, succeeds **James F. Dolansky,** who will be a consultant for the company until he retires in October.

Algrid C. Pocius, director-publicity, **CF&I Steel Corp.,** has transferred his headquarters to the corporation's general offices in Denver, Colo.

Carl R. Spoeth has been named manager-industrial sales, **Rust-Oleum Corp.** Mr. Spoeth's new responsibilities will include supervision of all Rust-Oleum's industrial,

(Continued on page 86)



NOW GERMAN FEDERAL OFFERS MODERN CONTAINER-TRANSPORTATION FOR YOUR **FREIGHT** The outlook at German Federal...modern, to provide you with container-transportation for any load that can be transported by truck. German Federal offers individualized service, with frequent schedules over a vast network of track, to expedite your load. Numerous dockside facilities, as well as inland container terminals. Bales, beans, or baseballs...all ride safe, secure on German Federal, in trans-containers which minimize handling, loss and crating weight costs. Let's talk freight before you ship your next load. Contact Dept. P

GERMAN FEDERAL RAILROAD
11 WEST 42nd STREET, NEW YORK, N.Y. 10036
JOACHIM WENZEL, GENERAL REPRESENTATIVE

GFR GENERAL AGENCY FOR NORTH AMERICA

Circle 43 on reader service coupon

TRAILERS - TRACTORS - TRUCKS
CONTAINERS - "TEMP-CONTROLLED" REEFERS

PIGGYBACK AND HIGHWAY EQUIPMENT LEASING ENGINEERS SINCE 1919

GFT HALL MARK OF SERVICE

LEASE OR RENT

GENERAL TRANSPORT EQUIPMENT COMPANY, INC.

CHICAGO • 1800 WEST 43rd STREET • TEL. FR 6-8070
SAN FRANCISCO • OAKLAND Nation-Wide
NEW YORK • JERSEY CITY World-Wide

A Subsidiary of Consolidated Leasing Corporation of America

Circle 48 on reader service coupon

MARKET OUTLOOK

Carloadings

Loadings of revenue freight in the week ended June 17 totaled 570,783 cars, the Association of American Railroads announced on June 22. This was a decrease of 6,442 cars, or 1.1%, compared with the previous week; a decrease of 54,230 cars, or 8.7%, compared with the corresponding week last year; and a decrease of 33,362 cars, or 5.5%, compared with the equivalent 1965 week. Ton-miles generated by carloadings in the week ended June 17 are estimated at 14.7 billion, a decrease of 5.4% below the corresponding week of 1966, and 3.1% above the 1965 week.

REVENUE FREIGHT CARLOADINGS
For the week ended Saturday, June 17

District	1967	1966	1965
Eastern, including Allegheny and Pocahontas ..	229,843	248,443	247,134
Southern	115,232	117,177	108,979
Total Eastern and Southern Districts	345,075	365,620	356,113
Northwestern .	78,055	93,599	87,075
Central Western	106,681	123,775	119,236
Southwestern .	40,972	42,319	41,721
Total Western Districts	225,708	259,693	248,032
Total All Roads	570,783	625,313	604,145
Commodities:			
Grain and Grain products	46,273	61,563	55,736
Livestock	965	1,208	1,291
Coal	116,604	121,912	115,624
Coke	7,145	8,644	8,746
Forest Products	40,415	41,054	36,233
Ore	53,907	61,285	56,654
Merchandise l.c.l.	4,831	6,390	9,755
Miscellaneous .	300,643	323,257	320,106
June 17	570,783	625,313	604,145
June 10	577,225	621,155	604,343
June 3	508,836	547,685	530,484
May 27	573,652	611,744	600,776
May 20	571,344	609,325	598,678
Cumulative total, 24 weeks ...	12,923,355	13,447,480	13,254,422
Estimated revenue ton-miles (billions) 24 weeks ...	335.4	338.8	313.0

PIGGYBACK CARLOADINGS.—U. S. piggyback loadings for the week ended June 10 totaled 22,470 cars, carrying 36,906 trailers, compared with 23,003 cars, carrying 37,670 trailers, in the corresponding 1966 week. Loadings for 1967 up to June 10 totaled 514,560 cars, carrying 846,235 trailers compared with 492,375 cars, carrying 813,505 trailers, in the corresponding period of 1966.

IN CANADA—Carloadings for the ten-day period ended May 31 totaled 117,395 cars, compared with 81,661 for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada		
May 31, 1967	117,395	35,918
May 31, 1966	111,851	36,033
Cumulative Totals		
May 31, 1967	1,542,028	541,488
May 31, 1966	1,647,642	556,763

FREIGHT TRAIN CARS

► *Atlantic Coast Line.*—Breakdown of spending program (RA, June 19, p. 61) is as follows: ACF will supply 600 70-ton, 50½-ft box cars. Pullman-Standard will supply 1,000 cars as follows: 400 70-ton, 50½-ft cushion underframe cars; 50 90-ton 60-ft cushion underframe cars; 150 70-ton, 50½-ft cars; 400 50-ton, 40½-ft cars with roof hatches.

► *Frisco.*—Breakdown of spending program already announced (RA, June 19, p. 61) is as follows: Cars to be ordered will be 100 100-ton open-top hopper cars; 200 50-ft, 70-ton box cars equipped with cushion underframes; 100 50-ft, 70-ton insulated box cars equipped with cushion underframes and load dividers; 200 100-ton gondolas; 20 70-ton Airslide covered hopper cars; 12 100-ton Airslide covered hopper cars; 10 high-cube auto parts box cars; 25 wood rack cars; 50 50-ft box cars equipped with cushion underframes and load dividers; and 15 60-ft, 100-ton insulated box cars

► *Santa Fe.*—New orders include 200 open-top hopper cars from Greenville Steel Car and 35 high-cube auto-parts box cars from Thrall Car. Orders will also be placed for 30 flat cars, 32 gondolas and 200 89-ft flat cars for TOFC/COFC service. In addition, approximately 1,000 cars of various types will be built in company shops at Topeka, Kans., and Cleburne, Tex.

► *Trailer Train.*—Placed orders for an additional 792 cars, bringing total orders since Jan. 1 to 2,702 cars. Pullman-Standard will supply 297 89-ft, standard level piggyback cars and 10 60-ft flat cars; Bethlehem, 336 89-ft, standard-level cars; and ACF, 149 89-ft, standard-level cars. As of June 16, TTX had 40,667 cars in service and on order.

► *Union Pacific.*—Asked for bids on 1,925 new freight cars—1,450 box cars, 200 90-ton covered hopper cars, 175 fleet cars and 100 wood-chip gondolas. All are for delivery in the latter part of 1967 and early 1968. These cars are in addition to 1,995 cars for which orders were announced earlier (RA, June 19, p. 61).

LOCOMOTIVES

► *Illinois Central.*—Will spend $2 million to bring 18 first-generation (vintage-1950s) locomotive units up to standards of units being produced today. First unit off the line at IC's Paducah, Ky., shops was a 1,750-hp GP 9 built in 1955.

► *Santa Fe.*—Released orders for nine 3,600-hp diesel-electric units from EMD; and six 3,000-hp units from General Electric.

PASSENGER TRAIN CARS

► *Santa Fe.*—Will order 30 flat cars and 62 mail containers for passenger-train service.

FOREIGN

► *Mexico.*—General Motors has completed delivery to Mexico of 10 domestic-type, 3,000-hp, Model GP-40 diesel-electric locomotives; and is currently delivering an additional seven export-type, 800-hp, 3-ft gauge, Model G-8 units. All 17 locomotives are for the National of Mexico.

YOU OUGHT TO KNOW

C&EI seeks stock-offer power: Chicago & Eastern Illinois has filed for ICC approval to offer stockholders rights to subscribe to a maximum of 650,000 shares of authorized but unissued common stock. The price, at least $10 per share, would be set in relation to the market after ICC approval. Offering and record dates would be set then, too. Subscription rights would be transferable, and stockholders could over-subscribe up to 100% of basic rights. Missouri Pacific, which took control of C&EI May 12, plans for full use of its basic and over-subscription rights. Sale proceeds would cover capital improvements.

Whitehead & Kales acquisition: The Portersville Equipment Co. of Portersville, Pa., builder of stainless steel trailers for the food, dairy and chemical industries, has been bought by Whitehead & Kales. The Portersville firm, which also makes high-pressure containment vessels and semi-cryogenic vessels, will be operated as a W&K subsidiary.

Evans' car fleet grows: United States Railway Equipment Co., leasing arm of Evans Products Company, has increased its leased fleet from about 7,600 cars in the last quarter of 1965 to about 12,400 cars, including those that are committed for lease this year as soon as delivery can be obtained. C. Calvert Knudsen, president, told the New York Society of Security Analysts that "the ability to finance our railway car sales through leasing is a valuable sales tool and, in addition, we believe that leasing tends to build more stability into our basic earnings trend."

LA gets transit grant: Department of Housing and Urban Development officials announced a $975,000 grant to the Southern California Rapid Transit District for first-phase technical studies prior to construction of a rapid transit system. The SCRTD will match the federal contribution with $487,000; the total sum will be used for preliminary planning and engineering, systems operating criteria, cost and revenue estimates.

Two-in-one

The next two issues of Railway Age will be combined into a single edition, dated July 3/10, 1967. It will be mailed July 7.

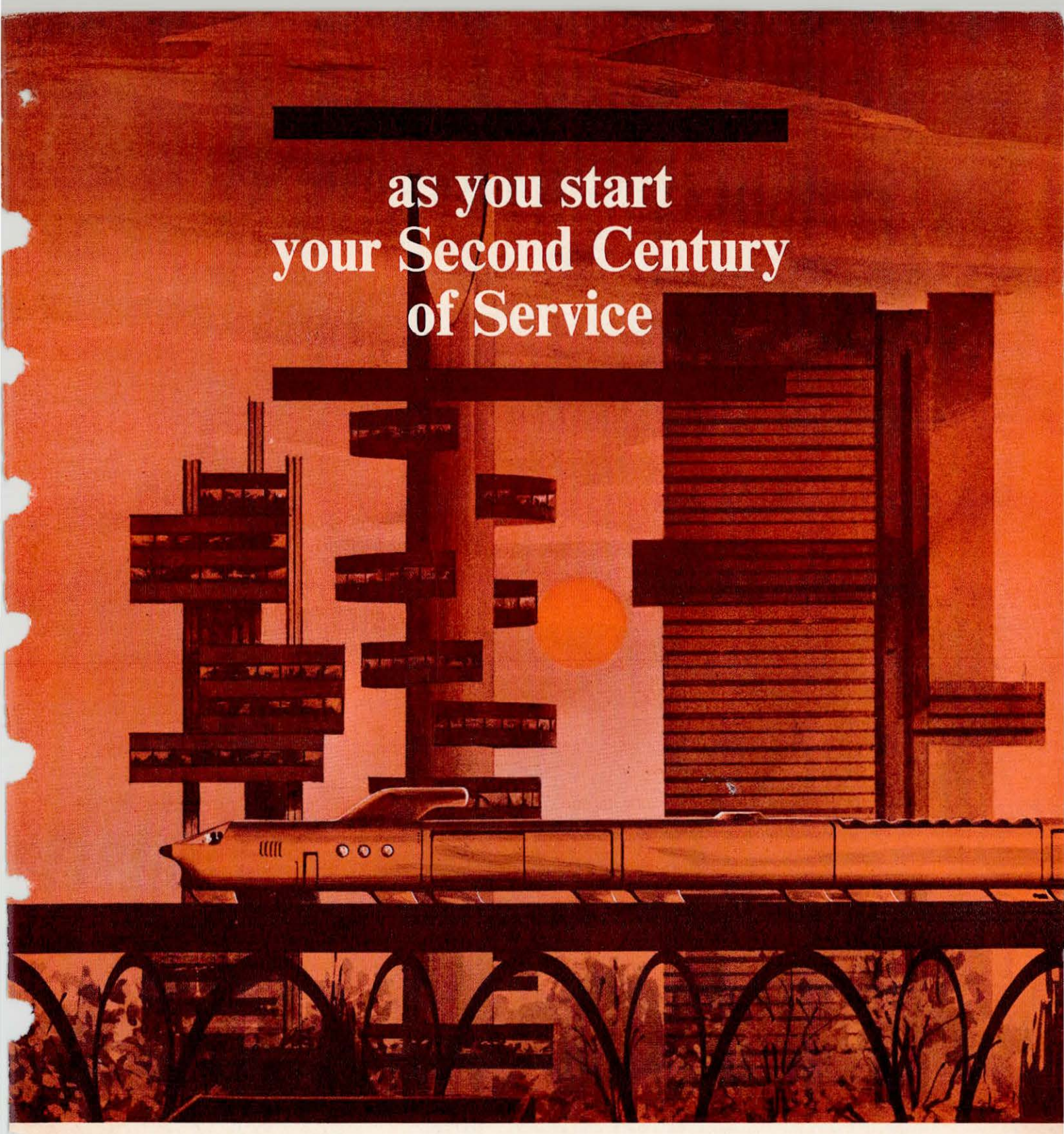
Stop, look, listen: You solve one problem—and you find yourself stuck with another. For years, trains moving over Rock Island's Illinois division between Orion and Toulon have been restricted to 15 mph. Now, the 36-mile stretch has been upgraded, and train speeds have been increased to 40 mph. What's the new problem? Simply that motorists in the area, as Superintendent Frank J. Garner put it, "have fallen into a very dangerous practice of racing [15-mph] trains to the crossings. Obviously, this is an unsafe practice—but with increased train speeds, it could be fatal." And that's why RI is making a saturation effort to enlist the support of news media along the Orion-Toulon line in getting the word to the motoring public.

New transport director: John A. Bailey will become director of the Transportation Center at Northwestern University and professor in the College of Arts and Sciences on Sept. 1. Bailey has been chief administrative officer of the Southeastern Pennsylvania Transportation Authority in Philadelphia since 1964. Formerly, he was executive director of the Passenger Service Improvement Corporation of Philadelphia, with responsibility for rail commuter programs, and deputy managing director of the City of Philadelphia.

Truck tonnage: Intercity truck tonnage in the week ended June 10 was 14.8% above that of the previous week and 6.3% below the volume in the corresponding week of 1966, according to American Trucking Associations. The substantial week-to-week percentage increase can be attributed to the Memorial Day holiday, which fell on Tuesday of the preceding week.

Current statistics

Net Income	
3 mos., 1967	$120,000,000
3 mos., 1966	172,000,000
Carloadings, revenue freight	
24 wks., 1967	12,923,355
24 wks., 1966	13,447,480
Freight cars on order	
May 1, 1967	34,960
May 1, 1966	59,317
Freight cars delivered	
4 mos., 1967	32,785
4 mos., 1966	29,300
Serviceable cars	
May 1, 1967	1,422,886
May 1, 1966	1,410,539



A sincere "Well Done" to the AAR's Mechanical Committee for its contributions to better railroading during the past 100 years. If, as it is written, the future can be foretold by looking at the past, then the Mechanical Committee and the Railroads will move forward, together, to even greater transportation accomplishments in the next century. P.S. And National will be right there, too, with significant research, quality products, comprehensive service — as we have for 100 years. For National is also starting its Second Century this year.

9398-A

OUR 100th YEAR

NATIONAL CASTINGS DIVISION
Midland-Ross Corporation

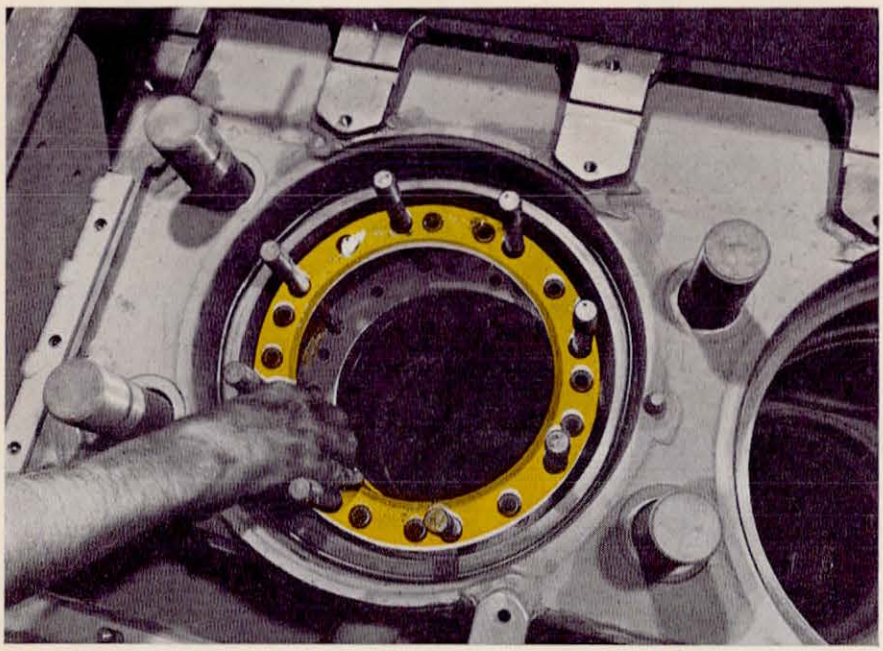
RPI

Circle 44 on reader service coupon

10600 QUINCY AVENUE • CLEVELAND, OHIO 44106

You mean that's all there is to it...just drop in one piece?

Sure, instead of 13 or 25 pieces...and these Parker diesel head gaskets stay tight over 300,000 miles!



Over 4,000 Parker diesel head gaskets are in service today, without a single reported leak! One user reached 300,000 miles, inspected, and put the same seals back into service. Installation normally takes a few seconds, because you just drop the seal—a single piece—into the cylinder and bolt on the head. No loose grommets or separate fire seal rings. No O-Rings. **And no leaks!**

A typical railroad can save over $40,000 per year with simplicity and performance like this. That is a strong statement—so why not make us prove it? Tests are being conducted throughout the industry to provide ample data for your decision. Ask for details.

Parker SEAL COMPANY

Culver City, California and Cleveland, Ohio • Distributors in Principal Cities

Circle 45 on reader service coupon

(Continued from page 82)

railroad and marine sales activities, under the direction of **John P. Moran,** director-domestic sales.

David N. Borden has been promoted to the position of director of purchases, **Timken Roller Bearing Co.** Mr. Borden succeeds **Paul E. Young,** who has been hospitalized. Previously, Mr. Borden had been the firm's assistant secretary.

Gary D. Francis has been appointed sales engineer, **Kemlite Corp.** Mr. Francis will be responsible for all railroad and TOFC sales from Chicago to the East Coast. He will handle the complete line of Kemlite transportation products.

Paul F. Giesking has been appointed assistant to the president, development, **National Steel Car Corp.,** at Hamilton, Ont. Until recently, Mr. Giesking was general superintendent of railroad and harbor operations at Wabush Mines, with responsibility for general supervision over construction and operation of the Arnaud Railway, the Wabush Lake Railway, and related plant facilities.

Carl H. Rieger has been appointed southeastern sales representative for **Railweight, Inc.**

P. E. Meier has been appointed district manager, southwestern district, for the **New York Air Brake Co.** Mr. Meier's headquarters will be in St. Louis.

James J. Chavis has been appointed director of sales of **Evans Products Co.'s** Chicago railway equipment operation. Mr. Chavis, formerly general sales manager of the firm's Railway Equipment Division at Plymouth, Mich., has moved to the company's Creco plant, Chicago.

Charles E. Gross has been appointed to the newly created position of director of material planning for Evans' Railway Car Division. Mr. Gross will have responsibility for planning and coordinating all materials for the production of railcars.

Jerome H. Hines has been appointed president of the **Unit Rail Anchor Co.,** a division of the Dyson-Kissner Corp. He succeeds **A. C. Laessig,** who has been named chairman of Unit Rail Anchor.

Paul W. Campbell has been appointed manager, marketing services, for the Tank Car Division of **Union Tank Car Co.** Mr. Campbell will have responsibility for internal control and administration of Union's tank car fleet of over 50,000 cars. He will be based at the company's Chicago headquarters. **John C. Piebes** succeeds Mr. Campbell as head of the Philadelphia office and district sales manager-Middle Atlantic District.

George Hamburger, manager of sales, has been promoted to manager of marketing, wire and cable division, **Copperweld Steel Co.,** Glassport, Pa. He will continue the supervision of the field sales force and will also be in charge of mill sales.

OBITUARY

Franklin R. Pope, vice president-director of transportation, **Republic Coal & Coke Co.,** died June 6.

James R. Clary, 63, retired assistant manager, purchases and stores, **Norfolk & Western,** and former general purchasing agent of the **Nickel Plate,** died June 12 in a Cleveland, Ohio, hospital.

Advertisers' Index

ACF Industries, Inc., American Car & Foundry Div. 54-55
Association of American Railroads 77
Buffalo Brake Beam Company ..... IFC
Canadian Pacific 49
Cardwell Westinghouse Co. 26
Difco, Inc. 76
Evans Products Company 24-25
FreightMaster-Div. of Halliburton Co. 23
Fruehauf Division, Fruehauf Corporation 14
General Transport Equipment Co., Inc.,
Subsidiary of GFT Leasing, Inc. 82
General Steel Industries, Inc. ..... BC
German Federal Railroads 82
Greenville Steel Car Company 73
Hercules Incorporated 71
Hogart Manufacturing Co. 80
International-Stanley Corp. 19
Kaiser Aluminum & Chemical Corp. 9
Kansas City Southern Lines 3
Kemlite Corporation 69
Keystone Railway Equipment Company 61-64
Landreth Industries, Incorporated 15-18
Lord Manufacturing Company 67
Louisville & Nashville R.R. Company 39-40
Lufkin Foundry & Machine Co. 65
MacLean-Fogg Lock Nut Co. 6
Manganese Steel Forge Co. 60
Metal Products Department, The Dow Chemical Co. 78
National Castings Division, Midland-Ross Corporation ... 85
New York Central System 52
Pak-Mor Manufacturing Co. 59
Parker Seal Company 86
Pittsburgh Forgings Company 80
Pullman Standard, Division of Pullman, Inc. 50-51
Reading Railroad 56-57
Republic Steel Corp. 70
Reynolds Metals Company 44-45
Servo Corporation of America 68-69
Sinclair Refining Co. 20-21
Standard Car Truck Co. 10
Stucki Company, A. 79
St. Louis-San Francisco Railway Company 72
Stromberg-Carlson 22
Sylvania Commercial Electronics Div. 27-30
Symington Div. of Symington Wayne ..... IBC
Thermo King Corporation 4
Timken Roller Bearing Company, The 42-43
United States Steel Corp. 74-75
Universal Railway Devices Co. 81
Youngstown Steel Door Co. 13

HAVE A HEART
SUPPORT
YOUR
HEART FUND

FOR SALE
A few copies of a book "R.R. Maintenance" by K. Pfahnl German text, 160 illustrations printed in 4 colors, 3d ed. published by German R.R. in 1944. $15 postage paid. Write to A. Pfahnl, 235 S. Harrison St. East Orange, N.J. 07018

M OF W SUPERVISION
A Chicago area belt railroad has immediate openings for experienced supervisors in all Maintenance of Way operations. No travel required. College degree preferred, but not essential. Salary will be commensurate with individual's education and experience. Company offers excellent fringe benefits. Send resume to:
Box No. 204
C/O Railway Age
14 East Jackson Blvd.
Chicago, Ill. 60604

Railway Contractors
Engineer & Construction Supervisor, 11 years experience with major Midwest R.R. Co. desiring position with Railway Contractor. Resume furnished on request. Write Box 206, Railway Age, 14 E. Jackson Blvd., Chicago, Ill. 60604.

WANTED salaried salesman to cover East Coast area for railway supply company. Mechanical background preferred but not essential. Salary commensurate with experience and attitude. Send resume and salary requirements to:
RAILWAY AGE, BOX 222
30 Church Street
New York, N. Y. 10007

LOCOMOTIVES FOR SALE OR LEASE
1—44-T G.E. Switcher
1—70-T G. E. Switcher
1—45-T G.E. Switcher
2—100-T 660 HP Alco Switchers
2—100-T 660 HP Baldwin Switchers
15—125-T 1600 HP Baldwin Road Switchers, late model
6—125-T 1600 HP Fairbanks-Morse Rd Switchers, late model

LOCOMOTIVE CRANES FOR SALE
1—40-T Ind Brownhoist, 60 ft boom, excel. cond.
1—25-T Link-Belt, 50 ft boom
Striegel Supply & Equipment Corp.
6001 Chemical Road
Baltimore, Md. 21226

Relay Rails—Bars—Tie Plates

115# RE—39'—C.C.	1500 Tons
112# RE—39'—C.C.	2500 Tons
85# ASCE	2200 Tons
65# ASCE	1100 Tons

MIDWEST STEEL CORPORATION
P. O. Box 271, Charleston, W. Va. 25321, Phone 304-343-9508
1811 Railway Exchange Bldg., St. Louis, Missouri 63101, Phone 314-241-8081

FREDERIC R. HARRIS, INC.
Consulting Engineers
Rapid Transit, Railroads, Highways, Bridges, Traffic & Parking, Airports, Urban Renewal, Water Supply, Sewerage, Buildings, Port Development
Transportation Studies • Reports • Design • Inspection of Construction
300 E. 42nd St., New York, N. Y. 10017
Stamford, Conn.
Washington, D.C.
Woodbridge, N. J.
New Orleans, La.

Gannett, Fleming, Corddry & Carpenter, Inc.
Engineers
TRANSPORTATION,
RAIL-RAPID TRANSIT, HIGHWAYS
Water, Sewage, Bridges
Airports, Traffic and Parking
Appraisals, Investigations and Reports
HARRISBURG, PA.
Philadelphia, Pa. • Daytona Beach, Fla. • Pittsburgh, Pa. • Medellin, Colombia, S.A.

BUY & HOLD
UNITED STATES
SAVINGS BONDS

TRAFFIC MANAGERS
When you need fast, dependable, economical
FREIGHT CAR REPAIRS
Use our modern car shops so conveniently situated at Buffalo, N.Y. on the PRR and NYC Railroads, and at East St. Louis, Ill., on the Alton & Southern. We're experts in repairs, reconditioning and painting of all types of freight and tank cars; in lining of hopper and tank cars.
We can redesign and rebuild your present cars to give them greater carrying capacity or greater length to suit today's needs. We also build special purpose cars to your exact specifications. All Morrison car work satisfies AAR specifications and every job is fully guaranteed.
We invite your inquiry by mail or phone.
MORRISON RAILWAY SUPPLY CORP.
Offices: 508 Rand Bldg.
Buffalo, N.Y. 14203
Phone: (AC 716) 856-5820

Advertising Sales Department
C. J. Fisher, vice president—sales, New York

New York, N. Y. 10007,
30 Church St., (212) 964-3060
W. A. Cubbage—regional sales manager
Charles E. Keil—advertising sales representative

Chicago, Ill. 60604,
14 E. Jackson Blvd.
(312) 427-3501
J. R. Thompson—vice president;
K. F. Sheeran—regional vice president;
Michael C. Shea—manager railway sales
John M. Brennan, Peter Hoagland—advertising sales representatives

Lakewood, Ohio 44107,
12700 Lake Ave., Apt. 1310
(216) 226-8038
Harry H. Melville—vice president

Pittsburgh, Pa. 15219, Room 720,
(412) 471-7871
Frick Building
William M. Champion—district manager
Ross Mandic—advertising sales representative

Atlanta, Ga. 30309,
22 Eighth St., N. E.,
TRinity 2-6720—J. S. Crane

Dallas, Tex. 75219,
3636 Cedar Springs (#207)
(214) 521-2322
Joseph Sanders

Los Angeles, Cal. 90017,
1313 West Eighth St.
(213) 483-8414
Fred Klaner, Jr.

San Francisco, Cal. 94133,
515 Pacific Ave.
(415) 421-7004
Lewis A. Vogler & Co.

London S. W. 1, England
TRafalgar 6318
67/68 Jermyn St., St. James's
Max F. Holsinger, Peter Clifton, F. E. Mizen

Manchester 22, England
Haletop
Wythenshawe Civic Center
Ian Goulden

Paris, 8e, France
70 Rue de Ponthieu
Philippe Chaudron

4 Düsseldorf-Rath
Eitelstrasse 32
Max F. Holsinger,
E. Hillerbrand, Herbert Haibt,
C. W. Schmidt, Reinhard Schomburg

Tokyo, Japan
Sun Gain Shia, Ltd.
Shiba Nikkatsu Bldg.
13, Shiba Park
Minato-Ku
C. H. Yiu, Managing Director

VIEWPOINT

Marketing: On the mark?

What is marketing, anyway? It is simply (or not so simply) this: Finding out what a customer needs or wants—then finding out if you can give it to him at a price he can afford to pay.

In recent years, railroads have become very marketing oriented. Or so they claim. Rarely does a railroad president's speech flutter off the mimeograph machine without a proud reference to the marketing concept and its triumph on his particular railroad.

No longer, declare the speechifiers, is a train just a string of freight cars that clatter between X, Y and Z at the whim of the operating department. Today's freight train (at its optimum) is part of a production or distribution pipeline—a collection of custom-built vehicles made available to customer and consignee when and where they're needed.

In view of all this, the results of this month's Railway Age Traffic Poll are disturbing and perplexing.

We asked industrial traffic managers—the men who decide whether to put their freight on railroads, on trucks or in airplanes—what they thought of railroad marketing surveys.

Three out of four put their X's in the "never surveyed" column.

That's a pretty low mark for marketing, though not necessarily as low as a first glance might indicate.

The railroad industry as a whole *has* done a good marketing job in broad areas, and the proof of this is the fact that we now have auto-rack trains, unit trains—indeed, piggyback itself, which is a highly customer-oriented service.

And there have been individual railroad successes. A recent example is the Reading's Bee-Line service, which is seizing short-haul traffic once thought to be captive to truckers.

Another railroad that hasn't been content to stop with the broad frontal assault is the New York Central. Right now Central is going after the garbage-disposal business, trying to persuade a potential customer that it's cheaper to haul refuse away than to burn it; our guess is they'll succeed.

But it's too easy to pick out the successes; the failures are what matter.

And failures there have been, somewhere along the line, if three out of four TM's feel that their companies have been untouched by the "marketing revolution."

Perhaps they *have* been touched in a broad way, without realizing it. If any of these "never surveyed" TM's are using any of the services referred to above, they are reaping some of the benefits of the marketing concept whether they know it or not.

In that case, there's been a breakdown in communication. That's a problem for the public relations and advertising departments.

But few railroad men close to the problem will deny that marketing has, so far, been more talked about than practiced. Perhaps the real moral of this story is best expressed by the refrain of that great old southern spiritual:

"Everybody talks about heaven ain't a-goin' there."

And while we're on the subject

What do you do when your biggest customer says your product is deteriorating and getting worse all the time? Tell him he's crazy and doesn't know a good thing when he sees it? Or try to remake the product to his demands?

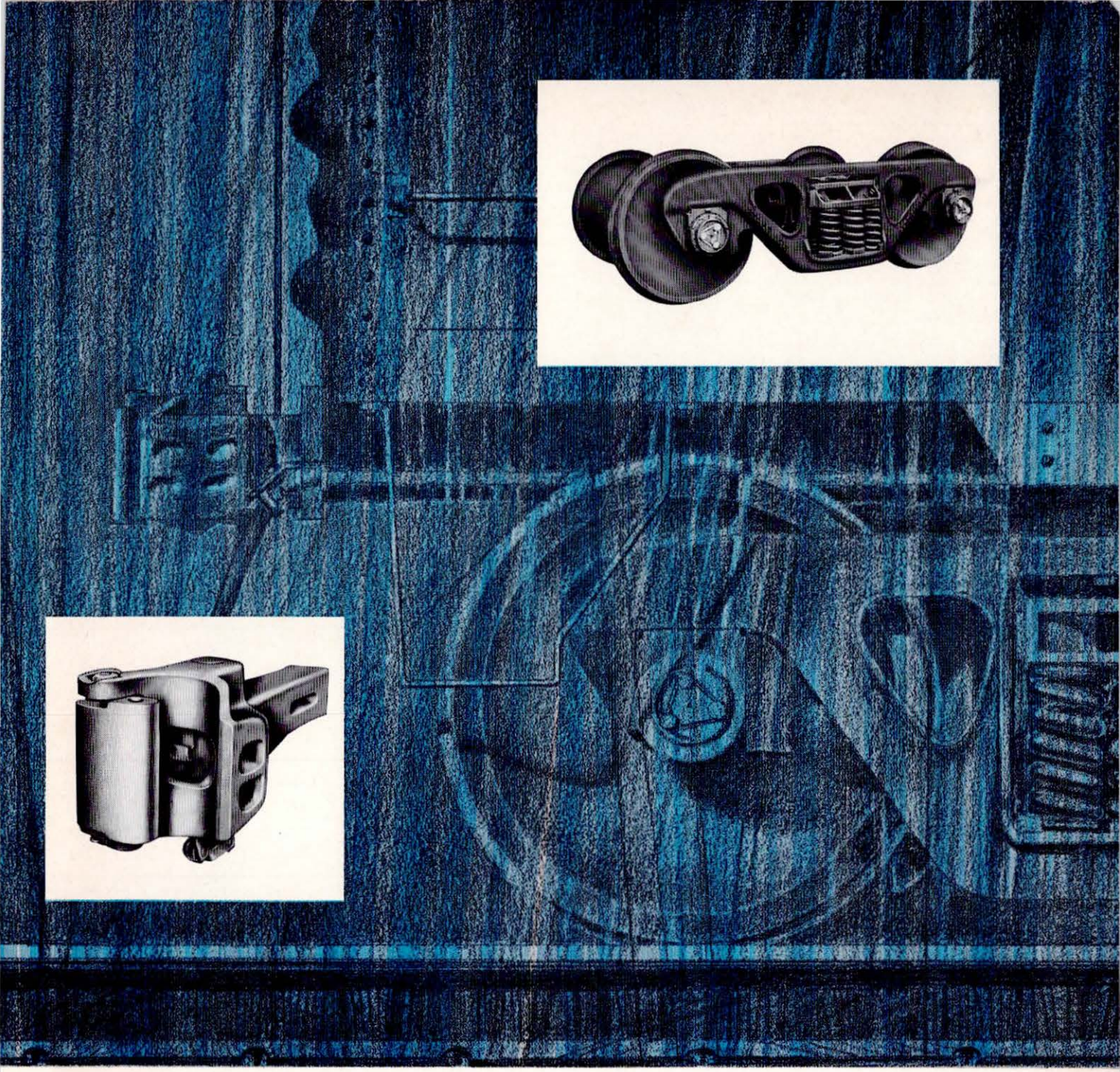
The U.S. Post Office is the biggest single customer of the railroads. Last year the P. O. paid railroads $300 million for hauling mail. Not bad, but not as good as earlier years. And railroad mail revenue is declining as trucks and airlines capture a bigger share of the traffic.

The Post Office insists that it wants to use trains, but on its own terms. If railroads will concentrate more on bulk haulage, and less on R.P.O.'s, they can keep a good share of the business, suggests Washington.

Not long ago Postmaster General Lawrence O'Brien suggested that railroads mount a massive study to see what they can do, by way of new transportation concepts, to help the Post Office trim its big deficit (and, at the same time, help themselves to keep the mail traffic).

So far we have heard no authoritative reply to Mr. O'Brien's request.

Isn't this an opportunity for an industry-wide marketing task force?



symington completes the picture

Complete Your Car Construction Picture with QUALITY Components from Symington.

You have the reputation for wanting the best freight cars—so, naturally, you want the best built components. Components you can count on come from Symington. They help you establish customer satisfaction—that extra something that spells repeat customers—repeat because they are satisfied customers.

There's a lot of Symington in a good freight car.

- COUPLERS
- YOKES
- STRIKERS
- TRUCKS
- BOLSTER CENTER FILLERS
- SIDE FRAMES
- SNUBBERS

The difference is Symington . . . Better Design, Better Engineering, Better Durability, Best Service.

SYMINGTON WAYNE TRANSPORTATION EQUIPMENT

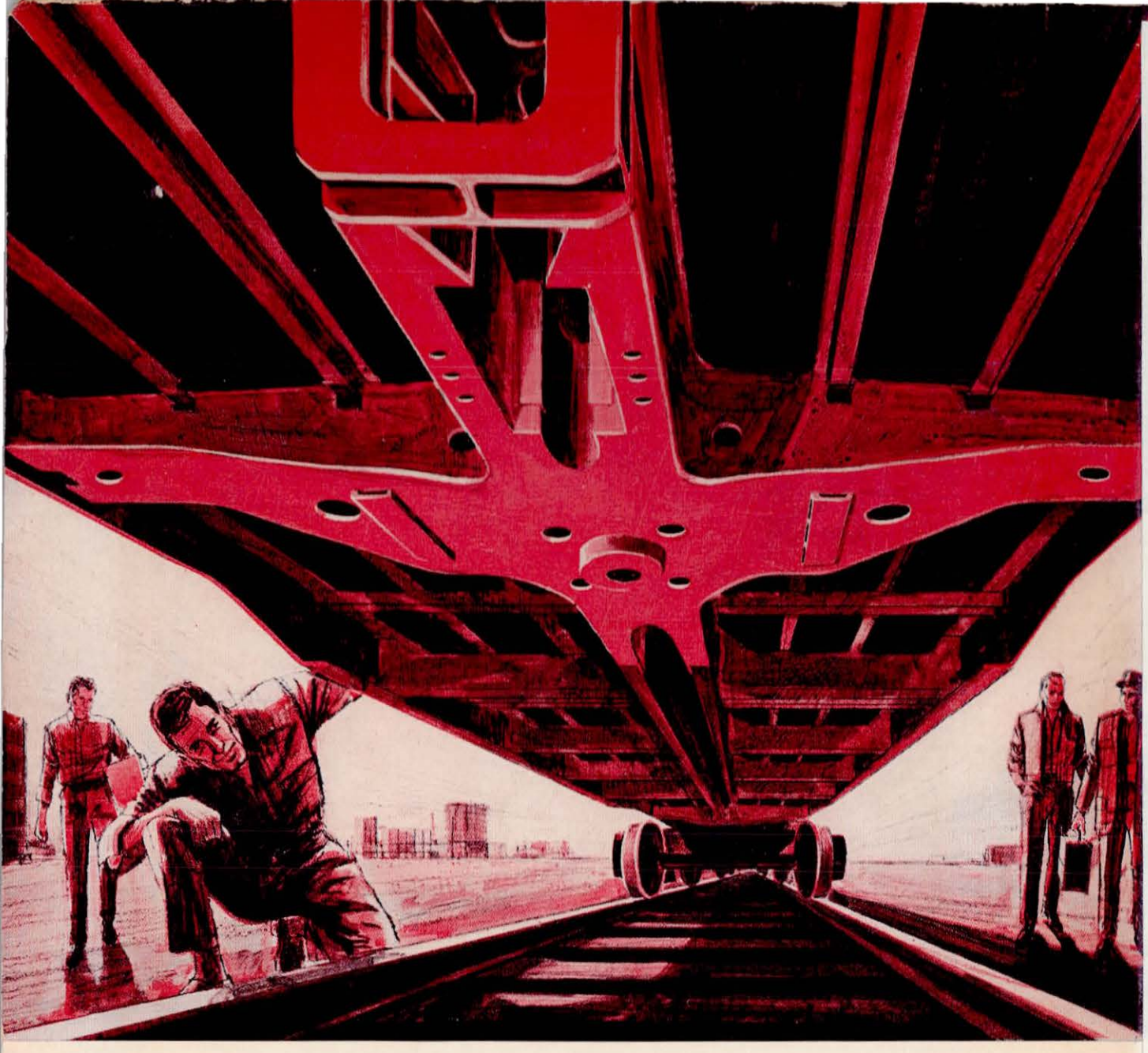
symington division

SYMINGTON WAYNE CORPORATION

332 South Michigan Avenue • Chicago, Illinois 60604

Chicago • New York • Boston • Baltimore • Philadelphia • Depew, N. Y.
San Francisco • St. Louis • In Canada: W. K. Davidson & Co., Ltd., Montreal

Circle 2 on reader service coupon



MEMBER RPI RAILWAY PROGRESS INSTITUTE

The strong points in this underframe are the GSI Cast Steel Ends. You can put them in when you build a car or when you make car repairs. Either way you eliminate bolster failur Over 15,000 carsets in service prove it.

GENERAL STEEL INDUSTRIES INC.
CASTINGS DIVISION
GRANITE CITY, ILL. • PHILADELPHIA, PA. • SAN FRANCISCO, CALIF.

GSI